NEW REMEDIES.

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MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

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EDITORIAL.

IN our September number, we called attention to a telegraphic message which had been received in this city from Memphis, Tennessee, stating that of the drug-stores in that city only two remained open at that date, the others having been closed in consequence of the death of the proprietors from yellow fever or through their removal to a place of greater safety. We have since received the names of the men who kept their posts in spite of the pestilence, and who have well earned the honor of being known for their bravery through the land. In the store of Robert Baltier and Son, the clerks Louis Laurenson and Charles Noel remained on duty, and in the establishment of Morrison and Hume, both of the proprietors having died, their prescription clerks George Battier and J. Brooks continued the business.

These are very likely but two instances of heroism of the many which have undoubtedly occurred, and we would suggest that it would not be inappropriate for the American Pharmaceutical Association to take such action with reference to these and such other instances as are very likely to be known to its Southern and Western members, as would express to these heroic men the esteem and honor which their conduct confers upon the profession to which they belong. So much has been written and said about the duties and obligations of pharmacists to the public, that when such opportunities for commendation occur, they should not be overlooked.

THERE is a very justifiable disinclination on the part of most men to have their private character and acts made the subjects of public comment, and it is one of the degrading features of much of the secular journalism of the present day, that these very matters are the ones which appear to be sought after with the greatest avidity, and published with the least regard for good taste or decency. We are not, therefore, surprised at receiving the following card from an unknown, but friendly correspondent in Philadelphia, in relation to our announcement in October, of a forthcoming series of portraits :

"I see you propose enlarging your very valuable Journal, which far eclipses any one of its kind in the English language, but when you insert 'full-page portraits' of 'leading pharmacists,' please insert dead ones only, as their true history and value can only be known after they have left. (See Senator Thayer's resolution in reference to the likenesses of living men on the Currency.)

"Yours respectfully,
"CONSTANT READER."

We wish, however, to dissent from the latter opinion thus expressed, and our reasons for doing so are briefly as follows :

Our choice of subjects for biographical and pictorial notice will not, as has in many instances been the case, be open to purchase ; but we shall exercise our judgment in publishing portraits of those, only, who have become well known to the medical and pharmaceutical professions through their writings and labors ; their enterprise in developing new lines of research or business and in other ways that identify them with the advancement of the science with which this journal is most closely allied. To a certain extent these labors and experiences have become the common property of the professions, and a more general knowledge of them can be given in a way which will avoid all appearance of eulogy and flattery, or anything like an advertisement of the subjects of the sketches, and which will, nevertheless, serve to encourage others in their efforts to attain to similar eminence, or satisfy a very general

desire to have reliable information concerning the professional career of those whom their brethren recognize as leaders.

If our correspondent thinks that it is our intention to enter into accounts of a personal character, such as would be appropriate only in the case of deceased persons, he has quite mistaken our purpose.

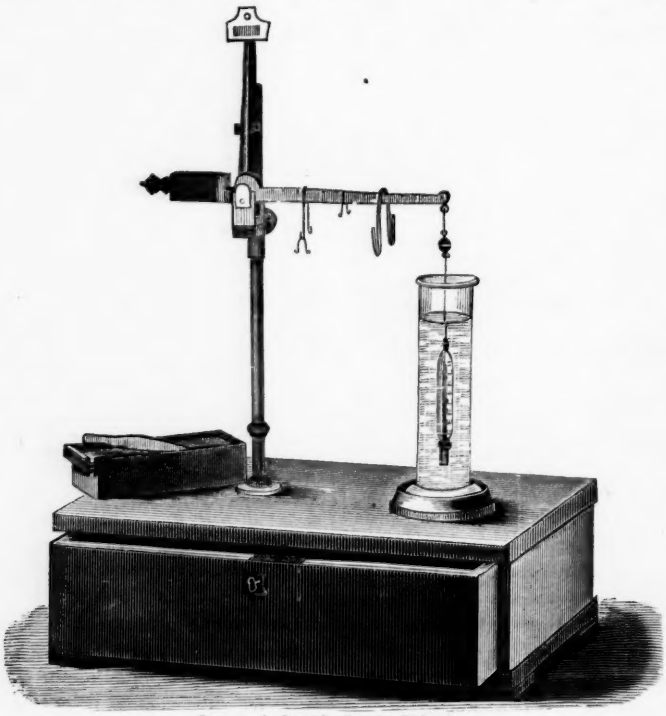
Before announcing our project, we had received a number of letters asking for the publication of such a series of sketches, and the desire which finds an expression in this manner is just as laudable as that which leads pharmacists and physicians to organize associations which have for their end, not only an interchange of ideas on professional topics, but quite as often to provide the means for a more intimate acquaintance with contemporaneous workers in the same field.

How many are there whose personal influence continues long to survive their removal from active life, however marked it may have been, while they were moving among their fellows, and what interest has the portrait of such a one for those who remain in the field compared with that of a living and active co-laborer?

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Reimann's Specific Gravity Balance.

THIS new balance is constructed on the principle of Mohr's, which we have illustrated on page 78 of our preceding volume. It consists of a base, an upright pillar, carrying the vernier, and a beam, one arm of which is divided into 10 equal parts, from the last of which the accompanying float is to be suspended. The other parts are: a cylindrical jar, with a loose wooden base, for holding the liquid to be examined, the floating thermometer, and the weights. The floating thermometer, or *float*, including platinum-wire, has a weight of exactly 10 grammes, and displaces 5 gm. of distilled water at 15° C. Hence the unit of weight is 5 gm.; the other weights (*riders*) represent 0.5, 0.05, and 0.005 gm. When using the balance, the float is suspended from the end of the long arm, and exact equilibrium is established by means of the screws at the end of the short arm. Whenever the index points to the exact centre of the vernier, the largest rider is affixed to the point where the float is suspended, and the latter is immersed in distilled water at 15° C., until the equilibrium is

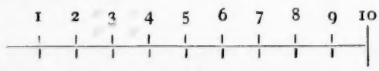


Reimann's Specific Gravity Balance.

again restored. The point up to which the float with its suspending wire is immersed, under these conditions, is to be exactly marked, as in all future experiments with other liquids the float must be immersed to the same depth. The twisted loop of the platinum-wire, at the upper end of the float, must be fully immersed. Another equally heavy rider, which is also furnished, is now suspended in place of the former, when, if both are identical in weight, the same point of immersion must be reached. Each of these weights represents 5 gm.: the float weighs 10 gm.; hence, if both riders are suspended together in place of the float, the balance must be in equilibrium, if correct.

When examining a liquid *lighter* than water, and the float has been immersed, one of the large riders is placed on one of the notches of the long arm, so that the balance stands poised. But if, to produce this effect, the rider would have to be placed *between* any of the notches, it is set over the next inner one (where it would still leave the arm too light), and counterpoise is sought to be established by hanging the next smaller rider in one of the notches. Should this not succeed, the latter is likewise transferred to the next inner notch, and equilibrium produced by suspending the smallest rider from one of the notches.

Supposing the arm with its divisions to be represented by the following figure:



The float being suspended from the end of the arm (10), and immersed in the liquid up to the correct mark, supposing the largest rider, if suspended on notch 8, is found too light, and, if on 9, too heavy, it is brought back to 8, and the next smaller rider then used. Supposing again, that the latter, if suspended from 8, is found too heavy, but if from 7, too light, it is put over 7, and equilibrium established by using the smallest rider, which we will suppose to produce this effect when suspended from 3. If still unbalanced, a fourth rider may be used, which will be found to produce sufficient exactness. Each successive rider gives the corresponding figure of a decimal fraction, thus:

0.873

The fourth rider would give the fourth decimal figure.

If the liquid to be examined is heavier than water, one of the large riders is suspended from the 10-mark of the beam, and represents 1.000. The further manipulation is the same as in the former case.

The loss or breakage of the floating thermometer belonging to this apparatus does not, as in the case of other similar balances, necessitate the complete and laborious readjustment of the various parts of the apparatus. It is only necessary, after procuring a new float, to immerse it, as first stated, in distilled water at 15° C., and to mark the place up to which the wire is submerged. Every float is made with great care so as to weigh 10 grammes, and to displace exactly 5 grammes of water. The apparatus may be obtained from the manufacturer, L. Reimann, of Berlin.*—From *Pharm. Centralh.*

On the Quality of Curare.

Dr. Albert N. Blodgett writes that the quality of this drug is subject to great variations, some specimens being nearly worthless. He has obtained most satisfactory results from solutions of that solid extract which presented a brittle fracture and was of a glistening dark-brown color. The most useful form for subcutaneous use seems to be a solution of all portions of the drug in distilled water. A sediment is deposited which does not need to be disturbed in using the solution. A dose of such a solution, containing from 0.0075 to 0.01 gramme of curare, will usually prove sufficient for an ordinary speckled frog and is about one-sixth the maximum dose recommended to be used in the treatment of tetanus. Considering the rapidity with which curare is eliminated, Dr. Blodgett thinks a larger dose might well be used and that it should be frequently repeated.—*Boston Med. and Surg. Jour.*

The Argan Tree.

Mr. Consul Drummond Hay, referring to the great scarcity of food in Mogador† at the beginning of the year, the result of a visit from the locusts, followed by drought, speaks of the services rendered to the natives and their flocks at such times by the argan tree (*Argania sideroxylon*). From the seeds of this tree, the natives extract an oil that is used for cooking and lighting purposes. When ripe, the fruit, which is an egg-shaped drupe, falls from the trees, and the goats then enter into competition with their masters for a share of the harvest. The goats, however, only swallow the fruit for the sake of the sub-acid rind, and being unable to digest the hard seeds, eject them during the process of ruminating, when they are gathered and added to the general store for oil-making. In preparing the oil, the natives crack the "stones," toast the kernels in an earthenware dish, and then grind them to flour. A paste is then made by stirring this flour with water, from which, after being allowed to harden, the oil is obtained by pressure.—*Pharm. Jour. and Trans.*

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* *L. Reimann*, Berlin, S. O., Schmidtstrasse 32. The price is 30, 36, or 50 marks, according to more or less elegance. The float alone costs 4.50 marks.

† Mogador (called also, Swurah—The Beautiful) is the principal seaport of Morocco, on the Atlantic, 125 miles W. S. W. of Morocco.

DANGEROUS COSMETICS.

BY M. BENJAMIN.

MAN, gifted with keen appreciation of the beautiful, endeavors always, when defects exist in nature, to replace them by artificial means. As we look back and among the lower classes of humanity, we find this love of beauty expressed in elaborate decoration by means of bright colors and gaudy apparel. Thus the Indian indicates this feeling by means of the colored paints with which he adorns himself; choosing, for warlike purposes, one hue, while for peace he decks himself in another. Co-existent with this æsthetic quality, mankind exhibits a desire to resist the inevitable ravages of time. Youth, buoyant and expectant, seems ambitious to develop its strength, and is anxious for the battle of life. Perhaps the glamour which is spread over the trials of life by the youthful makes the aged desire to regain their former vigor. Who can tell?

The "Elixir of Life" furnished study for the magicians and alchemists of old, many of whom, in the practice of their "divine art," dreamed that, at last, they had discovered the means of making life eternal. Then, consuming the results of their labors, they would, alas, demonstrate the fallibility of their powers. Travellers scoured the wide world in search of the spring whose waters should possess the quality of rejuvenating the old and of curing the diseased. These, too, though often bringing fame and renown to the searchers, still failed of the desired result.

It seems to have been reserved for American enterprise and ingenuity to impose on the public credulity by productions of "cheap imitations of the original."* One look at the Patent Office Reports would suffice to convince the most incredulous of the existence of "modern elixirs." In the numerous dyes, restorers, renewers, rejuvenators, regenerators, ambrosias, tonics, and others possessing French names (which certainly appeal to the more highly æsthetic as well as to the larger purses), we find the facilities with which we may delude ourselves (and sometimes others?) that, once more, we may be young again. These cosmetics or beautifiers (for the word cosmetic is derived from κοσμέω, to render beautiful), vary in their use and in their constituents. Those intended for hair- and whisker-dyeing are generally compounds of silver and are sold to the public in boxes containing two and sometimes three bottles; the first of which is usually found to contain a tincture of pyrogallic acid, sometimes only the latter. Bottle No. 2 consists of an ammoniacal solution of argentic nitrate. The third bottle, when one is added, contains potassic bisulphide. The use of this latter is only recommended when the two previous fail to produce the desired effect. The theory of the application of these dyes consists in the anointing of the hair primarily with the pyrogallic acid, then applying the silver which is reduced to its metallic state by the organic matter of the hair, or else it is precipitated as argentic sulphide which colors the hair black. If a lighter tint be desired, a smaller quantity or a more diluted amount of the pyrogallic acid is employed. As a type of this variety I quote a specimen from the Patent Office report for 1863, Dec. 15th, granted to Dominique Duprat, of New York:—

Argentic nitrate	30	parts by weight.
Gallic acid	10	" " "
Pomade	500	" " "

To be perfumed as desired.

These silver compounds are not considered dangerous or injurious.

The so-called hair restorers (principally lead compounds) are those which produce the most deleterious effects, being very poisonous; they yield the direct opposite of that which they purport to do, being destroyers instead of restorers. They are generally composed of some salt of lead—often the plumbic acetate or sugar of lead—dissolved in water which is highly perfumed and holding flowers of sulphur in suspension. Of such a nature is the following one, analyzed by Hager:

Eau de Capille.—A mixture of 16 grammes of glycerin, 8 grammes of hyposulphite of soda, 1 gramme of sugar of lead, about 2 grammes of precipitated sulphur, and 130 grammes of water, perfumed with a small quantity of eau de cologne.*

I add two more of these preparations which can hardly be surpassed in their ludicrousness.

Hair Restorative. J. SMITH, Colemansville, Ky.

Dried leaves of sage	1 oz.
Black tea	1½ oz.
Rain water	1 gallon.
Bay rum	1 quart.
Pure glycerin	5 oz.
Tincture cantharides	1 oz.
Corrosive sublimate	32 grammes.
Boxwood leaves	1 handful.

Digest for three days, and perfume with oil of bergamot or any other scent; also,

Hair Restorative. JOSIAH JOHNSON, Brooklyn, N. Y.

Willow ashes, leather ashes, cocoanut butter, and grape vine boiled down to a pomatum.†

These two are taken from the Patent Office Reports and amply illustrate the freedom which our Government allows to individuals whose desire seems to be the perpetration of fraud. The circulars that accompany these "Restorers of original Beauty and Color" are commonly elaborate compositions in high-flown language setting

* [That this is not peculiarly an American trait will be well appreciated after reviewing the multitude of formulas for cosmetic preparations existing in Europe, a few of which have been published in recent numbers of NEW REMEDIES.—ED. N. R.]

* *The Chemist and Druggist*, vol. xx., p. 195.

† Patent Office Report, Aug. 20th, 1872, No. 130, 720.

forth their peculiar merits, to which is usually added a certificate stating that this Restorer is absolutely free from injurious constituents and signed by —— —— M.D. They are generally manufactured on so-called chemical principles by "Professors" of unenviable reputation. The Egyptian Hair Dye which I have examined and in which I have determined the amount of lead contained, deliberately advises purchasers to test it by the "infallible test" of potassic iodide.

A word in regard to "lead poisoning." Lead is a cumulative poison, it is absorbed into the system and remains there until sufficient has been collected to produce illness, of which there are four varieties; viz. :* colic, arthalgia, paralysis (usually manifesting itself as "dropped wrist"), and brain disease. Only one case of direct death from this cause has come under my observation: that of the French actor Melingue, who died in March, 1875.

"It appears that during his theatrical career, he was in the habit of painting his face with oil-colors, finding that, from his skill in using the brush, he could make up his face better, and produce greater effects than by the use of ordinary cosmetics. But these colors being prepared with lead, the poison was absorbed by his skin, and finally caused the disease which at last proved fatal."† Two cases of partial paralysis, both occurring in ladies and resulting from the use of Hall's Vegetable Sicilian Hair Renewer, is mentioned in the *Boston Journal of Chemistry*.‡ An interesting case of lead poisoning recently occurred in London. A Mme. Rachel was in the habit of selling a wash which, upon analysis, proved to be composed of:

10 grains	.....	of a lead-compound.
50 "	.....	common fuller's earth.
160 "	.....	starch.
15 "	.....	hydrochloric acid.
2,400 "	.....	water.

Its use produced a violent eruption or rash on the parts applied.§

The dyes and restorers thus far mentioned have had for their object the darkening of the hair.

It is sometimes necessary that a lighter tint should be produced. Thus a criminal, in order to evade justice, may desire to change the dark color of his hair to a light tint.‖ For this purpose bleaching agents are used, such as chlorine and peroxide of hydrogen (H_2O_2). The peculiar "golden" tint which has been so much admired and has become so fashionable is produced by the last-named agent. A sample of the "Aurora Golden Fluid," sold by L. Shaw, 54 East 14th St., New York City, was submitted to Mr. N. Matsen, Ph.B., for examination. At my suggestion it was tested for this peroxide of hydrogen, which was found to be its chief component, a perfume being added to render it acceptable and valuable. In conclusion I would add the bit of wisdom from Ray, that "there is no better cosmetic than a severe temperance and purity."

The following are the results of an analysis of a considerable number of the cosmetics to be found in the market, and, with four exceptions, not included in the report made by Professor C. F. Chandler to the Metropolitan Board of Health in 1870. For convenience, they have been arranged in separate groups:

UNHARMFUL HAIR DYES.

The substances were first submitted to qualitative examination, and then the metal was quantitatively estimated. Bottle No. 1 was usually found to contain a tincture of pyrogallic acid, or else pyrogallic acid only. The pyrogallic acid was determined by the blue color it gives with proto-salts of iron, also by the brown to violet precipitate it yields with lime water $Ca(OH)_2$. The alcohol was obtained by distillation, a small glass condenser being used. The distillate was readily recognized by its aromatic odor, its burning properties, and its quick evaporation. Bottle No. 2 consisted in every case but one of argentic nitrate and ammonia, the exception being made by the addition of cupric sulphate. The determinations were readily made by well-known tests, the ammonia by Nessler's solution and potassic hydrate. The nitric acid seemed especially difficult to determine, as it failed to yield any reaction by the usual ferrous sulphate and sulphuric acid test. The alkaloids, such as brucia, refused to yield their brilliant reaction. It was only by boiling with concentrated sulphuric acid and copper filings that a small amount of the nitric dioxide (N_2O_2) was perceptible. In estimating the amount of silver present, it was my custom to evaporate to dryness, and then take up with nitric acid (HNO_3), followed by the precipitation of the silver as argentic chloride—the usual amount of liquid taken being a drachm.

Bottle No. 3 contained an impure potassic sulphide, although I was assured by dealers that it was simply sulphur.

Hill's Instantaneous Hair and Whisker Dye. C. N. CRITTENDEN.

Bottle No. 1 contained a light-brown liquid, of acid reaction; no residue on evaporation of pyrogallic acid.

The contents of Bottle No. 2 consisted of an ammoniacal solution of argentic nitrate. One fluid ounce contained 17.5929 grains of silver.

* *The American Cyclopedia*, vol. x., page 246.

A complete account of lead-poisoning appears in Percy's Metallurgy of Lead, giving its effects and antitodes.

Traité de Maladies de Plomb, Paris, 1839, is considered very reliable authority.

† *Appleton's Journal*, vol. xiii., page 571.

‡ Vol. iv., page 117.

§ See N. Y. *Herald*, April 26th, 1878. London *Times*, April 26th, 1878. N. Y. *Times*, March 4th, 1878.

‖ From Dr. Battershall's Legal Chemistry.

Hambleton's Hair Stain. J. HAMBLETON.

Bottle No. 1 contained a yellowish-brown liquid, with acid reaction, yielding no residue on evaporation. Composed of pyrogallic acid, with excess of alcohol.

Bottle No. 2 contained an ammoniacal solution of argentic nitrate. One fluid ounce contained 39.246 grains of silver.

Richmond Hair Dye. J. BLAIR.

Bottle No. 1 contained a brownish liquid, with acid reaction, yielding no residue on evaporation, of pyrogallic acid.

Bottle No. 2 consisted of an ammoniacal solution of argentic nitrate, colored blue by a small quantity of cupric sulphate. One fluid ounce contained 51.5132 grains silver.

J. Cristadoro's Excelsior Liquid Hair Dye.

Bottle No. 1 contained a yellowish liquid, with acid reaction, of tincture of pyrogallic acid.

Bottle No. 2 consisted of an ammoniacal solution of argentic nitrate. One fluid ounce contained 72.549 grains silver.

Bottle No. 3 contained potassic bisulphide (impure).

Bineaud's Celebrated Lightning Liquid Hair Dye. JOHN F. HENRY, CURRAN & CO.

Bottle No. 1 contained a light-brown liquid, acid reaction, leaving no residue on evaporation, of pyrogallic acid.

Bottle No. 2 consisted of an ammoniacal solution of argentic nitrate. One fluid ounce contained 81.2050 grains silver.

Bottle No. 3 composed of potassic bisulphide.

Batchelor's Premium Liquid Hair Dye. WM. A. BATCHELOR.

Bottle No. 1 contained a dark-brown liquid, acid reaction, yielding no residue on evaporation, of pyrogallic acid.

Bottle No. 2 consisted of an ammoniacal solution of argentic nitrate. One fluid ounce contained 81.9766 grains silver.

Bottle No. 3 composed of an impure potassic bisulphide.

POISONOUS HAIR RESTORERS.

These likewise were first submitted to qualitative examination; on proving the presence of lead, a fluid ounce was carefully measured out and filtered. The method of determining the lead had then to be considered. At first an attempt was made to determine it as such, precipitating it by means of zinc. This proved unsatisfactory, and the lead was therefore estimated as sulphate, a few drops of concentrated sulphuric acid being added to the filtrate, which was then evaporated to small bulk and weighed. The residue on the filter, consisting chiefly of sulphur, was burned in a porcelain crucible. The incinerated residue was then dissolved in nitric acid, and the lead precipitated as sulphate. The presence of acetic acid was made known by the precipitate of basic acetate of iron, obtained by boiling with a neutral solution of ferric chloride.

POISONOUS HAIR RESTORERS.

American Hair Restorer. C. E. FISHER & CO.

A colorless solution, with no sediment; neutral to test paper; lead combined as acetate. One fluid ounce contained:

(1).....0.12 grains of lead.
(2).....0.17 " "
Average.....0.145 " "

Jerome's Hair-Color, Restorer and Invigorator. JOSEPH W. HAYES, M.D.

A colorless liquid, with whitish sediment containing sulphur; the solution was slightly acid; the lead was combined as acetate; it contained oil. One fluid ounce contained:

(1).....0.51 grains of lead.
(2).....0.51 " "
Average.....0.51 " "

London Hair-Color, Restorer and Dressing. SWAYNE & SONS.

A colorless oily solution, with white to yellow sediment; acid reaction; contained sulphur; most of the lead was in solution, and combined as acetate. One fluid ounce contained:

(1).....0.85 grains of lead.
(2).....1.16 " "
Average.....1.01 " "

Dr. S. A. Chevalier's Life for the Hair. SARAH A. CHEVALIER, M.D.

A colorless solution, with brown or black sediment; neutral reaction; almost all lead in sediment with S.; the lead was combined as acetate. One fluid ounce contains:

(1).....1.04 grains of lead.
(2).....0.998 " "
Average.....1.02 " "

Clock's Excelsior Hair Restorer. DR. FRANK B. CLOCK.

A colorless solution, with dark-brown sediment; acid to test paper; contained sulphur in suspension; the lead about equally divided between residue and solution, and was combined as acetate. One fluid ounce contained:

(1).....1.33 grains of lead.
(2).....1.91 " "
(3).....1.95 " "
Average.....1.93 " "

Egyptian Hair Coloring. GEO. WM. SOUTHWICK.

A colorless solution, with a slight deposit of separated sulphur. The lead salt held in suspension by a solution of sodic hyposulphite; acid to test paper. One fluid ounce contained 2.37 grains of lead.

Pearson & Co.'s Circassian Hair Rejuvenator. J. S. PEARSON & CO.

A colorless solution, with yellowish sediment; acid reaction; contained S.; lead combined as acetate. The lead was about equally divided between solution and sediment. One fluid ounce contained:

(1).....2.23 grains of lead.
(2).....2.85 " "
Average.....2.54 " "

Knowles' Vegetable Hair Restorer. WM. H. KNOWLES.

A brown solution with dark-brown sediment; acid reaction; most of lead was in sediment, containing sulphur. The salt used was lead acetate. One fluid ounce contained:

(1).....2.48 grains of lead.
(2).....2.77 " "
Average.....2.63 " "

Montgomery's Hair Restorer. WM. C. MONTGOMERY.

A colorless solution, containing a pale-yellow sediment; the sediment is chiefly sulphur. Most of the lead being in solution, the solution is acid; the lead is combined as acetate. One fluid ounce contains:

(1).....3.17 grains of lead.
(2).....3.32 " "
Average.....3.24 " "

Xanthine Hair Restorative. R. W. POWERS & CO.

A colorless solution, with yellowish sediment, flavored

with bay rum. Acid reaction, contained sulphur; lead combined as acetate; most of Pb was in the solution. One fluid ounce contained:

(1)	4.02	grains of lead.
(2)	4.21	" "
Average	4.11	" "

Louisiana Creole Hair Restorer. MANSFIELD & HIGBEE.

A colorless solution, with a very light yellow sediment. Solution slightly acid. Sediment essentially composed of S. Most of lead in solution, and combined as acetate. One fluid ounce contained:

(1)	4.40	grains of lead.
(2)	4.54	" "
Average	4.47	" "

Barrett's Vegetable Hair Restorative. J. R. BARRETT & Co.

A colorless solution, with yellow sediment; acid to test paper. The lead was about equally divided between solution and sediment. Contained S. The lead salt was plumbic acetate. One fluid ounce contained:

(1)	4.89	grains of lead.
(2)	4.78	" "
Average	4.84	" "

Morse's Revivum, the Electric Hair Restorer. C. N. CRITTENDEN.

A colorless solution, with yellowish sediment, containing sulphur; acid reaction; lead combined as acetate. One fluid ounce contained:

(1)	5.50	grains of lead.
(2)	5.59	" "
Average	5.54	" "

Inimitable Hair Coloring. DEMAS BARNES & Co.

A yellow liquid, with grayish sediment; neutral reaction; most of the lead in combination with sulphur; the lead was in the substance as plumbic acetate; contained in four-ounce bottle. One fluid ounce contained:

(1)	7.95	grains of lead.
(2)	7.95	" "
Average	7.95	" "

Dr. Tebbetts' Physiological Hair Regenerator. TEBBETTS BROS.

A colorless solution, with yellow sediment; acid to test paper; contained much S. The lead was mostly in solution, and is combined as acetate. One fluid ounce contained:

(1)	6.76	grains of lead.
(2)	6.68	" "
Average	6.72	" "

NON-POISONOUS HAIR RESTORERS.

The following articles do not come within the previous classification:

Nature's Hair Restorer. PROCTOR BROS.

A colorless solution, with neutral reaction, containing sodic hyposulphite, $Na_2S_2O_3$.

It gave no precipitate with HCl, H_2S, or $(NH_4)_2S$, *vide* Patent Office Reports, March 23d, 1869, and Feb. 1st, 1870.

Dr. Kennedy's Hair Tea, or Oil of Tea.

A brownish liquid, with acid reaction, containing bay-rum.

Slight white residue on evaporation; contained none of the heavier metals, *i. e.*, no metals of HCl, H_2S, or $(NH_4)_2S$ groups.

Hiawatha Hair Restorer. JOSEPH HOYT.

This article consisted of an ammoniacal solution of argentic nitrate; contained in a two-ounce bottle.

One fluid ounce contained 3.05 grains silver, or the whole bottle contains 6.10 grains of silver, equivalent to 9.60 grains of argentic nitrate.

Summary.

UNHARMFUL HAIR DYES.

	Grains of silver in one fluid ounce:
Hill's Instantaneous Hair Dye	17.59
Hambleton's Hair Stain	39.25
Richmond Hair Dye	51.51
Cristadoro's Hair Dye	72.55
Bineaud's Celebrated Hair Dye	81.20
Batchelor's Premium Hair Dye	81.98

POISONOUS HAIR RESTORERS.

	Grains of lead in one fluid ounce:
American Hair Restorer	.19
Jerome's Hair Color Restorer and Invigorator	.51
London Hair Color Restorer and Dressing	1.01
Dr. S. A. Chevalier's Life for the Hair	1.02
Clock's Excelsior Hair Restorer	1.93
Egyptian Hair Coloring	2.37
Pearson & Co.'s Circassian Hair Rejuvenator	2.54
Knowles' Vegetable Hair Restorer	2.63
Montgomery's Hair Restorer	3.24
Xanthine Hair Restorative	4.11
Louisiana Creole Hair Restorer	4.47
Barrett's Vegetable Hair Restorative	4.96
Morse's Revivum, the Electric Hair Restorer	5.54
Dr. Tebbetts' Physiological Hair Regenerator	6.72
Inimitable Hair Coloring	7.95

NEW YORK CITY, October, 1878.

EXPLANATORY.

IN consequence of the statements by Mr. O. Hesse which lately appeared in the *Berichte d. Deutsch. Chem. Ges.*, concerning my article published in the April and May numbers of NEW REMEDIES and entitled "Our present Knowledge of the Cinchona Alkaloids," I would like to say that the latter was originally intended to be accompanied with notes, referring to the different authorities from which the various data were given. It was, however, afterwards found that this would extend the article beyond the available limits of the journal. A part of the notes were therefore transferred to the text, but in cancelling the notes, the important statement was omitted, that the largest part of the article consisted of an abstract of a paper by Mr. Hesse, as published in the *Berichte d. Deutsch. Chem. Ges.*, 10, 2,152; an omission which I much regret. The whole article was intended to be, not a recital of original investigations, but a *compilation* of the labors of the most recent and best authorities on the subject, and the illustrations of microscopic reactions, some of which Mr. Hesse erroneously ascribes to the compiler, were taken from Dr. Godeffroy's papers on the Cinchona Alkaloids, published in the *Zeitschrift d. Oester. Apotheker-Vereins.* Mr. Hesse states that figures 4, 5 and 6 prove that the alkaloid illustrated could not have been conchinine (quinidine). In this case Dr. Godeffroy is likewise the authority, who published them in the last-named journal (Feb. 10th, 1878, page 70).

CHARLES RICE

NEW YORK, Oct. 29th, 1878.

A Combined Stopper and Graduate.

THIS new device of Mr. W. L. Keller, of Baltimore, Md., is so simple, handy, and economical that it is somewhat surprising that it has not sooner been suggested. The completeness of the adjoining illustration renders it unnecessary to give any detailed description, and we will say only that for expensive essential oils or substances which are with difficulty removed from glass; for the bottles in a prescription case and for other

purposes which will readily occur to every pharmacist, the usefulness of these stopper-graduates must at once be apparent. The labor of cleansing graduates is by the use of these at once reduced to a minimum, and the saving of time and the certainty of finding the measure just where it is wanted are no small items for consideration.

The Centennial Fund.

AGAIN we call the attention of readers to the "Centennial Fund" of the American Pharmaceutical Association. A letter from Mr. George W. Kennedy, of Pottsville, Pa., which comes to hand as we are about to go to press, says that, from present indications, the prospect of raising the amount called for is far from encouraging. Only $350 to $400 are needed to make up the sum required by the proposition of the "Reception Committee," and no pharmacist who is interested in the future welfare of the association should fail to contribute *something* to the raising of this very small amount. Contributions will be gladly acknowledged by Mr. Kennedy.

THE BEHAVIOUR OF DIALYZED IRON TOWARD ARSENIOUS ACID.

BY EDWARD HIRSCHSOHN, MAG.PHAR.,
(DORPAT, RUSSIA.)

AMONG the theses presented on my graduation at the University of Dorpat was one which bore the following title: "The Antidotum Arsenici* cannot be replaced by Dialyzed Iron."

I did not at first intend to publish the experiments which have led me to this result, but the interest which has since been manifested in the subject has induced me to repeat my former experiments, and this has resulted in a confirmation of my previous views.

My experiments embrace the behaviour of arsenious acid towards dialyzed iron alone, as well as in presence of salts, albumen, and pepsin.

I. Experiments in which dialyzed iron, with or without addition of hydrochloric acid, was brought in contact with a solution of arsenious acid of known strength, at ordinary temperature, and at + 30–37° C. (= 86–98.6° F.)

1. 1 cub. centim. arsenical solution.†
   6 cc. dialyzed iron.

The mixture remained clear and unaltered, even after being digested for 12 hours at a temperature between 30° and 37° C.

2. 1 cc. arsenical solution.
   6 cc. dialyzed iron.
   5 drops of dilute hydrochloric acid.

No alteration.

3. 1 cc. arsenical solution.
   5 cc. dialyzed iron, and
4. 1 cc. arsenical solution.
   20 cc. dialyzed iron,

were each separately subjected to dialysis, during 12 hours, and the diffusate, which was colorless and free from iron, tested for arsenic,‡ the presence of which was indicated by decided reactions. In experiment 4, repeated dialysis effected the total removal of the arsenious acid from the mixture.

The above experiments show that arsenious acid does not combine with dialyzed iron, alone.

* The *Antidotum Arsenici*, also called "Antidotum Arsenici *Fuchsii*," is prepared by precipitating a solution of ferric sulphate with magnesia, whereby hydrated ferric oxide is precipitated, while magnesium sulphate is held in solution. The presence of this latter is considered an advantage, as it will cause speedy evacuation of the bowels.

The Russian Pharmacopœia gives the following direction:

Solution of ferric sulphate (tersulphate of iron)	℥ i.
Calcined magnesia	℥ iij.
Distilled water	℥ viij. M.

† The arsenical solution mentioned in all the following experiments contained 0.0203 gm. of *arsenious acid* in 1 cub. centim.

The dialyzed iron, except when otherwise indicated, contained 0.04 gm. of ferric oxide in 1 cub. centim.

‡ This was in each case done by passing a stream of sulphuretted hydrogen gas through the liquid previously acidulated with hydrochloric acid.

II. Experiments in which dialyzed iron was brought in contact with arsenious acid, in presence of various salts.

5. 1 cc. arsenical solution, neutralized with potassium carbonate and mixed with
6 cc. dialyzed iron.

A copious precipitate was produced. The liquid being filtered, yielded a colorless filtrate containing arsenic.

6. 1 cc. arsenical solution, neutralized with sodium carbonate, and mixed with
6 cc. dialyzed iron, and
10 drops of dilute hydrochloric acid, produced a copious precipitate. The filtrate contained arsenic *and* iron.

7. 1 cc. arsenical solution.
5 cc. solution of magnesium sulphate (= 0.5 gm. magnes. sulph.).
10 cc. dialyzed iron.

The resulting jelly-like mixture yielded a colorless filtrate containing much arsenic. The attempt to test the precipitate for arsenic failed, because on washing it redissolved.

8. 1 cc. arsenical solution.
5 cc. sol. of sodium phosphate (= 0.5 gm. sodium phosphate).
10 cc. of dialyzed iron.

Same result.

9. 1 cc. arsenical solution.
5 cc. solution of sodium phosphate (= 0.5 gm. sod. phosph.)
10 cc. dialyzed iron.

The mixture was digested 3–4 hours at a temperature between 30° and 40° C., with the same results as in the preceding experiment.

10. 1 cc. arsenical solution.
5 cc. solution of potassium nitrate (= 0.5 gm. pot. nit.).
10 cc. dialyzed iron.

The mixture remained clear, on prolonged standing, as well as on warming.

11. 1 cc. arsenical solution.
5 cc. solution of calcium chloride (= 0.5 gm. calc. chlor.)
6 cc. dialyzed iron.

A copious precipitate was produced; the filtrate was colorless and contained arsenic; the residue dissolved on washing with water.

12. 1 cc. arsenical solution.
10 cc. solution of sodium chloride (= 1 gm. sod. chlor.).
20 cc. dialyzed iron.

The large precipitate, which formed at first, disappeared after a few hours, being redissolved. The solution subjected to dialysis yielded a colorless diffusate containing arsenic.

13. 1 cc. arsenical solution.
5 cc. solution of neutral potassium tartrate (=0.5 gm. neutr. pot. tart.).
10 cc. dialyzed iron.

The filtrate, separated from the precipitate, contained arsenic and iron.

14. 1 cc. arsenical solution.
5 cc. solution of sodium carbonate (= 0.5 gm. sod. carb.)
10 cc. dialyzed iron.

The resulting viscid mixture gave a colorless filtrate, containing arsenic.* On bringing the above ingredients (in the same proportions) together, so that the arsenical solution is first mixed with the dialyzed iron, and the sodium carbonate solution added last, a thick mixture results, which cannot be filtered, but which, on dialysis, yields a diffusate containing arsenic.

Experiments 5–13 show that, even in presence of salts, arsenious acid does not enter into combination with dialyzed iron.

III. Experiments on the behaviour of arsenious acid towards dialyzed iron in presence of ammonia or magnesia.

15. 1 cc. arsenical solution.
5 cc. water of ammonia, spec. grav. 0.960.
10 cc. dialyzed iron.

The jelly-like mixture could not be filtered. On dialysis, arsenic was found in the diffusate.

16. 1 cc. arsenical solution.
10 drops of water of ammonia, spec. grav. 0.960.
10 cc. solution of ammonium chloride (= 0.5 gm. amm. chlor.).
10 cc. dialyzed iron.

Same result.

17. 1 cc. arsenical solution.
17 cc. Wagner's solution† (= 0.7 gm. ferric oxide).

This experiment was repeated twice, and yielded a colorless filtrate, free from arsenic.

18. 1 cc. arsenical solution, added to a mixture of
0.5 gm. calcined magnesia,
10 cc. water, and
10 cc dialyzed iron.

Yielded a colorless filtrate, containing only traces of arsenic.

19. 10 cc. dialyzed iron, added to a mixture of
0.5 gms. calcined magnesia,
5 cc. distilled water, and
1 cc. arsenical solution.

Produced a thick mixture, which could not be filtered. The diffusate was free from arsenic.

Experiments 15–19 show that only in presence of alkalies, *e.g.*, ammonia or magnesia, dialyzed iron is so far modified as to enter in combination with arsenious acid. At the same time, it results

* If the dialyzed iron, used in this experiment, was badly prepared and contained much chlorine, the resulting filtrate was entirely *free* from arsenic.

† Dr. Wagner gives the following directions:

Dialyzed iron	4
Water of ammonia, sp. gr. 960	½
Distilled water	15½

Mix the water of ammonia with the distilled water; then add the mixture gradually, under constant stirring, to the dialyzed iron.—*Jahresb. f. Pharmacie, etc.*, 1867, p. 242.

from exp. 15 and 16 that the presence of larger quantities of ammonia, or ammonium chloride, prevents the combination of iron and arsenic. In the experiments with magnesia, the larger portion of the arsenious acid no doubt combines with the magnesia (see exp. 19).

IV. Experiments in presence of pepsin, albumen, and some other substances.

20. 1 cc. arsenical solution.
    1 cc. wine of pepsin.
    5 cc. dialyzed iron.
21. 1 cc. arsenical solution.
    1 cc. wine of pepsin.
    10 cc. dialyzed iron.

Both mixtures remained clear and unaltered, both after standing for some time (36 hours), and on warming.

22. 1 cc. arsenical solution.
    5 cc. wine of pepsin
    10 cc. dialyzed iron.

Produced a copious precipitate. After removing the colorless liquid, which contained arsenic, by filtration, the precipitate redissolved on adding a fresh quantity of dialyzed iron.

23. 1 cc. arsenical solution.
    1 cc. wine of pepsin.
    5 cc. solution of sodium chloride (=1 gm. sod. chlor.).
    10 cc. dialyzed iron.

The resulting precipitate gradually redissolved on standing. The filtrate contained arsenic.

24. 1 cc. arsenical solution.
    1 cc. aqueous solution of pepsin (= 0.06 gm. pepsin).
    2.5 cc. solution of sodium chloride (= 0.5 gm. sod. chlor.).
    10 cc. dialyzed iron.

The filtrate, separated from the precipitate, contained arsenic.

25. 1 cc. arsenical solution.
    5 cc. egg-albumen.
    10 cc. dialyzed iron.

The gelatinous mixture yielded a yellowish filtrate, containing, besides arsenic, small quantities of iron.

26. 1 cc. arsenical solution.
    2 cc. egg-albumen.
    5 cc. wine of pepsin.
    10 cc. dialyzed iron.
27. 1 cc. arsenical solution.
    2 cc. egg-albumen.
    5 cc. wine of pepsin.
    0.25 gm. sodium chloride.
    10 cc. dialyzed iron.

In both cases, the yellowish filtrate, separated from the precipitate, contained much arsenic, and a small quantity of iron.

28. 1 cc. arsenical solution.
    2 cc. egg-albumen.
    2 cc. water of ammonia, spec. gr. 0.960.
    10 cc. dialyzed iron.

The filtrate contained iron, and very little arsenic.

29. 1 cc. arsenical solution.
    5 cc. wine of pepsin.
    0.5 gm. calcined magnesia.
    10 cc. dialyzed iron.

The filtrate was colorless, and contained no arsenic.

30. 1 cc. arsenical solution.
    5 cc. egg-albumen.
    10 cc. dialyzed iron.
    0.25 gm. calcined magnesia.

The filtrate contained iron, but no arsenic.

Experiments 20 to 30 show that neither albumen nor pepsin exert any influence on the behaviour of arsenious acid towards dialyzed iron.

VI. Experiments comparing the behaviour of the "Antidotum Arsenici" and of dialyzed iron towards arsenious acid in presence of magnesia and ammonia.

a. In absence of acids:

31. 1 cc. arsenical solution.
    20 cc. antidotum arsenici (= 0.218 gm. ferric oxide and 0.89 gm. calcined magnesia.)

The filtrate was colorless and free from arsenic.

32. 1 cc. arsenical solution.
    20 cc. of a mixture of dialyzed iron and ammonia, containing 0.252 gm. ferric oxide and 5 drops of water of ammonia.

The filtrate was colorless, but contained arsenic.*

33. 1 cc. arsenical solution.
    20 cc. of a mixture of dialyzed iron and calcined magnesia, containing 0.252 gm. ferric oxide and 1 gm. magnesia.

Result the same.

b. In presence of acids.

34. 1 cc. arsenical solution.
    20 cc. antidotum arsenici (=0.218 gm. ferric oxide and 0.89 gm. magnesia).
    dilute hydrochloric acid, containing 0.2% HCl, cautiously added, under constant stirring, to faintly acid reaction.

The colorless filtrate contained no arsenic.

35. 1 cc. arsenical solution.
    40. cc. of a mixture of dialyzed iron and ammonia, containing 0.504 gm. ferric oxide and 10 drops water of ammonia.

Treated as in the previous experiment with dilute hydrochloric acid (0.2%).

The filtrate was colorless, but contained arsenic.

36. 1 cc. arsenical solution.
    40 cc. of a mixture of dialyzed iron and calcined magnesia, containing 0.504 gm. ferric oxide and 2 gm. magnesia.

Treated with dilute hydrochloric acid (0.2%) as before.

* On repeating this experiment with a sample of dialyzed iron containing much chlorine, the resulting filtrate was obtained *free* from arsenic. See Exper. 14.

Result the same as in preceding experiment.

37. 1 cc. arsenical solution.
30 cc. antidotum arsenici (=0.327 gm. ferric oxide, and 1.335 gm. magnesia).

The mixture was faintly acidulated with dilute acetic acid (containing 0.6%) and filtered. The filtrate was colorless and free from arsenic. The same mixture, acidulated as before, and allowed to stand 12 hours, yielded a filtrate, likewise free from arsenic, but colored yellow from dissolved iron.

38. 1 cc. arsenical solution.
30 cc. of a mixture of dialyzed iron and calcined magnesia, containing 0.278 gm. of ferric oxide and 1.5 gm. of magnesia.

39. 1 cc. arsenical solution.
17 cc. of Wagner's solution (=0.7 gm. ferric oxide).

40. 1 cc. arsenical solution.
30 cc. of Wagner's solution (=1.4 gm. ferric oxide).

These latter 3 mixtures were each treated with dilute acetic acid (0.6 per cent), as in exper. 37. They all yielded a colorless filtrate containing arsenic.

The above detailed experiments prove that *arsenious acid does not enter into combination with dialyzed iron*, either alone or in presence of acids, albumen, or pepsin. The addition of ammonia or magnesia, however, causes the arsenic to enter into an insoluble compound.

In consequence of the results obtained in experiments 31 to 40, I desire to warn against the use of dialyzed iron as an antidote in poisoning by arsenic, because the resulting combination parts with its arsenic in presence of acids, much more readily than the ordinary "antidotum arsenici."

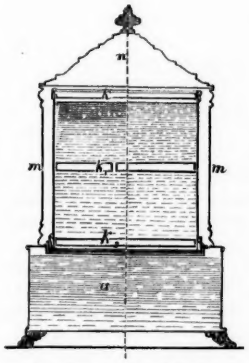
Estimation of Nitrous Acid in Spiritus Ætheris Nitrosi.

TH. ROSENBLADT recommends the following process for determining the amount of nitrous acid in spirits of nitre: Ten cub. centimetres of the latter are decomposed in a small well-closed flask of about 30 cub. cent. capacity, with a small quantity of alcoholic potassa solution, at a moderate temperature. When the reaction is finished, the alcohol is evaporated off, 10 cc. of concentrated solution of ammonium chloride are added, and the flask closed with a stopper provided with two glass tubes. One of those dips into a dish containing solution of potassa, through the other a stream of carbonic acid is conducted, to expel the air. As soon as this is the case, the other exit-tube is connected with a graduated cylinder, filled with solution of potassa, and the contents of the flask then heated to boiling, until no more nitrogen is given off. Finally, the volume of the liberated nitrogen is read off, and from it the corresponding quantity of nitrous acid calculated.—*Pharm. Zeit. f. Russl.*, 16, 257.

A new Filtering Apparatus.

MR. FRANZ HOLZINGER, of Gmunden, has constructed a new filtering apparatus which offers several advantages over those previously in use. Its principal advantage is the arrangement of the filtering medium; the sides as well as the bottom being lined with filtering paper.

The apparatus consists, in the first place, of a receptacle, *a*, to receive the filtered liquid, being a square box made of tinned iron, or any other material desired, which has a round opening left in the top into which the upper portions of the apparatus fit, as may be seen from the sectional view accompanying this article. The first piece fitting into the opening is a ring intended to hold in place the next following parts, and itself perforated with holes, for the passage of the filtered liquid. Next follows a very shallow circular dish with a narrow rim, provided all over



Holzinger's Filtering Apparatus.

with numerous holes. A piece of circular filtering paper, cut exactly, is laid on the perforated bottom of this dish. The real filter is the circular case, or drum, *m*, open below and above, and really consisting of two separate parts, namely: an outer mantle, *m*, and an inner drum, perforated with numerous holes. The diameter of this inner drum is such that it will fit nicely into the shallow perforated dish described above. A piece of filtering paper is now spread snugly over the inner surface of this drum, taking care that the paper projects about an inch over the lower rim. The paper is pressed against the sides of the drum, and held in place by the three spring-hoops, *k*, k_1, k_2. The projecting edge of the paper is now clipped down to the rim in about half a dozen places, and turned back over the rim. It is then inserted, with this rim downwards, into the shallow dish, where it forms, after moistening, a tight joint. There remains nothing but to fill the drum with the liquid to be filtered, which will pass quite freely and clear through the paper.—*Neueste Erf. und Erfahr.*, 1878, 385.

Commercial Notes on Drugs and Chemicals.*

Algarobilla.—The pod of *Balsamocarpum brevifolium*, nat. ord. Leguminosæ, from Chili, contains 67.45 per cent of tannin. The seeds constitute 12.5 per cent of the weight of the pod. It also contains a large amount of ellagic acid, which makes it very suitable for tanning purposes.

Araroba.—The stock of this is very small, and there is no immediate prospect of a new supply. Most of it has been exported to the United States.

Balsam Copaiva.—Has reached a very low price. Para balsam is more than usually thin-fluid, although quite as good as formerly, and less in demand. Angostura and Maracaibo found much favor. So-called East India copaiva† was also again inquired for. "Balsamum anarthriticum Indicum," much lauded as a remedy in gout and rheumatism, appears to be merely Gurjun-balsam, but commands about ten times the price of the latter.

Bismuth.—The large arrivals of Peruvian ores have been found of too low a percentage of metal to influence the market. The Saxonian mines produced 638 cwt. in 1877, of the value of $96,130. Complaints have been made in France about the presence of lead in bismuth-salts. This is owing to the fact that they used Bolivian bismuth, which contains variable quantities of lead and traces of selenium, both of which are absent from the Saxonian metal. The latter, however, contains copper, nickel, and arsenic. As long as the (German) Pharmacopœia does not demand the employment of a chemically pure metal, or directs that the crystallized acid nitrate be precipitated with soda, and the precipitate be thoroughly washed (to remove the traces of sodium arsenate formed), it is impossible to offer a purer article in the market. This process, namely, considerably increases the price, which is likely to be objected to by many consumers.

Borax.—Refined borax is very low in price, and the supplies from European sources so abundant, that Californian borax is scarcely noticed.

Cacao-butter.—While cacao-seeds have risen in price, that of butter has receded, because a lot of crude butter, which had accumulated in a New York factory, was shipped to Europe at a low figure.

Camphor.—Supplies are short, and the price in China is advancing. All the stock being in one hand, an advance is to be expected.

Cardamoms.—Malabar cardamoms, which are preferred, have again advanced 1*s.* per lb. The small stock in London makes a further rise highly probable.

Coca.—Is in good demand, but fine green leaves are extremely scarce.

Colocynth.—The new crop to be expected will probably cause a reduction in price. The best apples are produced in Cyprus, the occupation of which by England will probably benefit the cultivation and export of this drug.

Coto-bark.—Is likely to retain its place as a favorite remedy in dysentery. The alkaloids cotoine and paracotoine, however, are neglected.

Curare.—Is constantly sinking in price, and but little used.

Jaborandi.—Has become scarce. A new supply is on the way from Brazil.

Jalap.—Only small lots have arrived lately. The price is about double that of former years, and is likely to experience a further advance.

Insect-powder.—The flowers of "*Chrysanthemum*" and of *Pyrethrum*, which constitute this substance, have gone up in price. Unexpanded wild Dalmatian flowers (exported from Trieste) are preferred. The Caucasian pellitory-flowers are neglected.

Juniper-berries —The stock of Carpathian berries being exhausted, the market had to be supplied with Italian berries.

Musk.—Reports from China prognosticate a short supply of *Tonquin* musk. Up to the middle of July only 350 caddies had been exported (against 500 up to the same period of last year). Sophistications are constantly on the increase. Cabardine or Siberian musk, which reached the market formerly over Transbaikalia and Russia, is now also exported from Shanghai, and finds a ready sale.

Oil of bitter Almonds.—The price of the French oil has again declined, which fact, in view of the greater scarcity and higher price of almonds, is an additional proof that it is not made from almonds, but from peach- or apricot-kernels, or else artificially.

Oil of Rose.—This year's production represents a medium yield, about 300,000–320,000 meticals.* About one-half of the stock is still unsold at Kazanlik, and the price is likely to recede still further, while the quality is not first-class.

Acid, Benzoic.—Gehe & Co. deny the correctness of Rump's statement (see above, p. 240), that all (German) "sublimed" benzoic acid is made by subliming the artificial acid, made from urine, with a little gum benzoin. A considerable quantity of pure benzoic acid is now obtained from the Australian "gum acroides."

Acid, Carbolic.—An eventual success of the introduction of electric light in place of that by coal-gas, would directly affect the price of many important crude products, such as ammonia salts, coal-tar and its constituents and derivatives, namely *phenol*, benzol, anthracene, anilines, etc.

* Condensed from the September Report of Gehe & Co. Dresden.

† Oleo-resin of *Hardwickia pinnata* Roxb. See *Pharmacographia*, page 205.

* Metical, miskal, midkal, or muskati—in Bulgaria called *Exaji*—is equal to 4.8 grammes.—Ed. N. R.

Acid, Crysophanic.—That made from Goa powder has now entirely replaced that from rhubarb. Dr. Jarisch has found (see above, p. 208) that *alizarine* acts analogous to chrysophanic acid. The firm therefore also offer alizarine, in a dry form, for those who desire to experiment on the subject.

Acid, Hydrochloric.—The gradual introduction of the ammonia process for the manufacture of caustic soda from common salt, in place of the process of Leblanc, is likely to effect a great diminution in the production of muriatic acid. Solvay, the principal patentee of the new process, is therefore constantly at work to devise another cheap method for its manufacture. His last patent for this covers the decomposition of calcium and magnesium chloride by aluminium silicate at a red heat, and the passage over it of hot and moist air.

Acid, Sclerotic.—Has ceased to be in demand. Indeed it is pretty well proven that no single constituent of ergot possesses the specific effects of the drug itself.

Acid, Valerianic.—The natural acid, prepared from valerian root, remains as usual, scarce and very dear. But it is indispensable for the prepation of quinia valerianate *in large crystals.*

Amyl Acetate.—Is in good demand for perfuming cleansing liquids.

Atropia and Salts.—Gehe & Co.'s alkaloid, prepared by themselves, is very handsome and comparatively cheap. [Our own experience with it has been entirely satisfactory, and we have used it exclusively for nearly a year.]

Bromine.—The German product, although more expensive than the American, has nevertheless had a good sale, because it is purer (contains less chlorine), and has a higher specific gravity. Dr. Franck has recently patented a process to deprive bromine of all chlorine, which will eventually make it possible to prepare strictly pure bromides for medical, technical and analytical purposes.

Camphor, monobromated.—Is still in demand, less in Germany than in Holland or Russia. Gehe & Co. make the interesting statement, that when the use or sale of any new remedy has ceased in Russia, it may be considered as being discarded for good.

Chinoidine.—Most of the German chinoidine is exported to North-America, where it is chiefly used in the *preparation of a patent remedy.*

Ethyl bromide—used as a hypnotic and sedative, is but little used, while *Ethyl iodide*—as an antiasthmatic, is in considerable demand. The latter cannot be kept colorless; a yellowish color is perfectly admissible.

Iodine.—The coalition of the Scotch, French and Peruvian manufacturers decided last spring on an advance of 10½*d.* per oz. This has taken place towards the end of April, and the price is now 1*s.* per oz.

Iron preparations.—Dialyzed and saccharated iron have almost superseded the use of reduced iron in medicine.

Lithium salts.—The benzoate, considered the best remedy in gout, is in brisk demand. Next to it are the chloride and the citrate, which Gehe & Co. prepare in crystals (not as powder, as the Brit. Pharm. directs).

Naphthaline.—Is very much used to destroy moths and other insects, particularly in India and South-America. The darker grades, which have a more penetrating odor, are preferred for this purpose.

Quinine.—Without entering into details as to the reasons, probably well-known to our readers, for the fluctuations in the price of quinine during the last year, we will only mention that Gehe & Co. prognosticate a rise of the price to about that existing during July last.

Quinia hydrobromate.—Is said to have proved very efficacious in whooping cough.

Quinia valerianate.—Gehe & Co. state that they have a good stock of this salt, in very large crystals, having prepared it during the hot weather in July. (See above, under valerianic acid.)

Resin of Podophyllum.—The German product, which is distinguished by a yellowish-brown color from most of that made in the U. S. (which is greenish-brown), differs from the latter also in this that the German is entirely soluble to a clear liquid in alcohol, while the American leaves an abundant, greenish, slimy sediment. The damp summer has been the cause that it is less voluminous than formerly; for it must be dried at ordinary temperature, and not with artificial heat.

Resin of Jalap and of Scammony powdered—of Gehe & Co.'s manufacture, is described as very voluminous and not liable to cake.

Sodium benzoate—as a remedy for intermittent fever, has been in steady and good demand.

Sodium bromide,—which is preferred to the potassium salt particularly in the treatment of females and children, as the sodium base acts much less energetically, should be used in the state of a dry powder. The crystals, which contain 4 molecules of water, are too deliquescent.

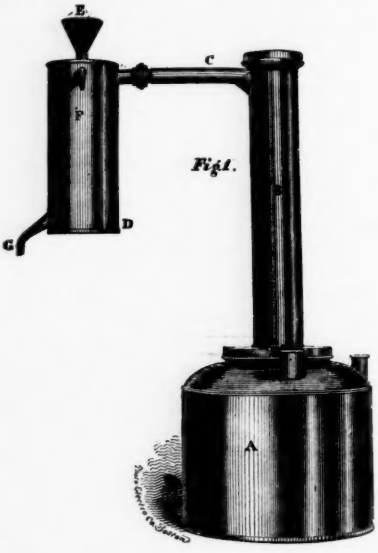
Thymol.—The extraordinary demand for this substance consumed all the stock, and, in absence of the material for its preparation, orders could not be filled. A new supply of the latter, the fruits of *Ptychotis Ajowan* (which yield it to best advantage) can hardly be expected to arrive from India before the end of October.

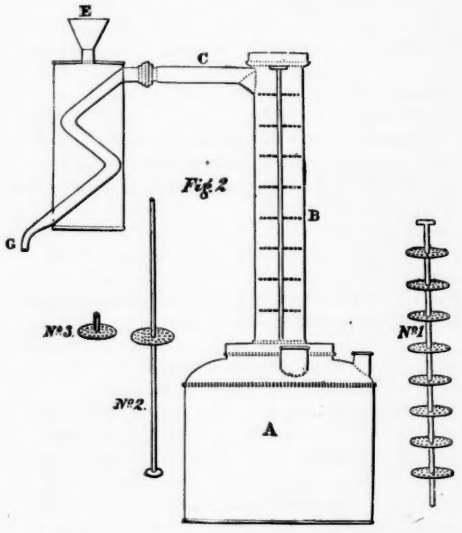
Toluol and Xylol—the principal by-products in the manufacture of benzol, deserve attention as menstrua in the laboratory, as they possess the solvent powers of benzol, but are much less volatile.

Impervious Rubber Tubing.—India-rubber tubing may be made entirely impassable to coal gas, by painting it over with water glass (solution of sodium silicate).

Improved Pharmaceutical Still.

For the purpose of making extracts and for reclaiming alcohol or ether from the residue of pharmaceutical processes, the pharmaceutical still here shown appears to possess some notable features. The boiler A, like the balance of the apparatus, is made of tinned copper, and has in its top a four-inch circular opening and two smaller openings for the introduction of fresh material, if required, and the insertion of a perforated cork holding a tube-thermometer. B is a column a foot high, soldered to a circular perforated plate, which closes the large opening in the top of the boiler. This column contains a number of perforated discs to atomize the ascending vapors, and is covered at the top with a screw-cap. From its side the pipe C connects it with the condenser D; E and F





are the openings for admitting and removing the water used in condensation, and G is the point at which the distillate is discharged. The joints being all made with screws and packing, can readily be made tight or taken apart, as needed. Besides the recovery of alcohol or ether, as above mentioned, this machine may serve a good purpose in the manufacture of medicinal waters.

Any of the better class of petroleum stoves now in the market will suffice to furnish sufficient heat, and will cost but little to operate.

Mr. W. W. Heritage, of 1618 Swain St., Philadelphia, is the agent for the apparatus.

On a new Quinia Salt.

Mr. Drygin, of Kutais (Caucasus, Russia), has discovered a new compound of quinia, which is very readily soluble in water, and is well suited for hypodermic administration. It is a double *hydrochlorate* (or *muriate*) *of quinia and urea*, or, as the author calls it, "chininum bimuriaticum carbamidatum," that is, bi-muriate of quinia and carbamide [or urea]."

Its price is about the same as that of quinia hydrochlorate, since $3\frac{1}{2}$ pounds of the latter and $6\frac{1}{2}$ ounces of urea yield 4 pounds of the new salt.

It is prepared as follows: One equivalent (396.5 parts) of quinia hydrochlorate (muriate) are treated in a porcelain-capsule with 1 equivalent (about 250 parts) of hydrochloric acid of spec. gr. 1,070, and the solution is filtered. To the filtrate is added 1 equivalent (60 parts) of pure urea, freed from ammonium sulphate by recrystallization from 95 per cent alcohol, or from absolute alcohol, in case the urea was wet. As soon as the urea is dissolved, the liquid is set aside and cooled, so that crystals may form. After 24 hours the latter are transferred to a funnel, drained, washed with very cold distilled water, spread upon plates, and dried at ordinary temperature. The motherwater is then concentrated and once more allowed to crystallize. The last brown motherwater is allowed to evaporate spontaneously, when all the quinia still present will gradually crystallize out. The final residue is a thick brown syrup, which yields no further crystals, does not freeze even at —18°C., and consists almost entirely of a new cinchona-alkaloid, *cinchonichine*.

Quinidia likewise forms a double salt with urea: the crystals have a yellowish color.

Hydrochlorate of quinia and urea crystallizes from hot solutions in hard, white, coalesced, four-sided prisms without terminal surfaces. On slow evaporation very large crystals are obtained. At ordinary temperature the salt is sol-

uble in *its own* weight of water, forming a dense straw-yellow solution, unalterable in air. It is neither hygroscopic nor efflorescent. At 70–75°C. it melts to a yellowish liquid, hardening on cooling to a yellowish mass; the salt thereby loses 10 per cent of water. On allowing this to stand exposed to the air it gradually reabsorbes the lost water, and becomes white again. It is also soluble in alcohol. Ether appears to throw down from this solution a different salt.

The salt contains 69 per cent of pure quinia; the ultimate constitution of the salt, however, has not as yet been determined.

The acid hydrochlorate of quinia can combine with ½, 1, or 2 equivalents of urea. In the first case the product ["chininum bimuriaticum semicarbamidatum"] crystallizes with difficulty in short, thick, opaque, yellowish hygroscopic prisms; in the last case we obtain a salt ["chininum bimuriaticum bicarbamidatum"], crystallizing in handsome 4 or 6 sided, fully developed and colorless prisms, permanent in the air.—*Pharm. Zeitsch. f. Russl.*, 1878, No. 15.

Apparatus for the Extraction of Fats, etc.

B. TOLLENS describes an improved form of an apparatus for the continuous extraction of fats or other substances, which are dissolved by volatile menstrua.

Into a glass-tube, *a*, 1¼ inches wide and 12 inches long, drawn out at the lower end, as shown in the cut, a bent piece of glass-rod is introduced, and upon the latter is placed a narrower and shorter glass-tube, the lower orifice of which is tied with filtering paper, and which is intended to receive the substance to be exhausted. The upper orifice of the outer tube *a* is closed with the cork *c*, bearing a glass-tube, which is connected with an upright condenser (not shown on the cut). The lower elongated end of the tube *a* passes through a cork into the small flask, which is charged with ether (or another menstruum) to about ⅓ of its capacity.

As soon as the ether begins to boil, on the application of heat, the vapors pass upwards through the tube, heat the inner tube, and reach the condenser, whence they are returned in the shape of liquid, which drops upon the substance, and runs saturated into the flask below. The heat is to be so applied that there is a constant layer of menstruum, about ½ inch high, over the substance to be extracted.—*Zeitsch. f. Anal. Chem.*, 1878. 320.

Miscible Copaiba.

WHEN a mixture of balsam of copaiba and a saturated solution of carbonate of potassium (34 grains to the oz.) are shaken until emulsified, a white crystalline substance is deposited after standing for a few days, leaving a clear supernatant stratum of what appears to be unaltered copaiba. The latter is capable, however, of being mixed with water, or saponified, forming a white emulsion, which is not the case with what is known as "soluble copaiba." In examining more critically the properties of this "miscible copaiba," Mr. T. B. Groves* used a mixture of Bals. copaibæ (six or eight years old), O. i.; Sat. sol. pot. carb., fl. ℥ ij., and noted the following characteristics:

Its appearance and consistence were similar to that of ordinary copaiba, but instead of having an acid, it had an alkaline reaction, and when shaken with water, instead of floating on its surface, as ordinarily, it readily formed with it a white emulsion, more or less stable according to the degree of dilution. This emulsion was, of course, readily destroyed by acids. As regards its behavior toward solvents, it differed little from ordinary balsam of copaiba. The only point worth remarking on in this connection was the fact that alcohol did not affect a perfectly clear solution, and caused, after a few days, a minute whitish deposit to collect at the bottom of the bottle. The removal of this substance (probably a resin-salt of potassium) did not, however, affect the emulsibility of the balsam.

So much for the fluid balsam, which had been carefully drained off from the underlying white saline deposit. This was found to be imbedded in a pasty resinous substance, on the surface of which were planted numerous crystals, slender needles of from one-quarter to half an inch long. The mass having been well washed with benzole, these crystals disappeared, and up to now they have refused, on the evaporation of the solvents, to put in a second appearance. The white substance left after the washing above referred to, proved to be entirely composed of minute crystals of bicarbonate of potassium.

The action, therefore, of the acid resins of the copaiba had been this—to deprive two molecules of the carbonate of half their potassium, leaving the second atom to combine with both atoms of carbonic acid and one atom of water, to form the acid carbonate of potassium and water, known as bicarbonate of potassium. No evolution of gas, therefore, attends the operation. It seems, moreover, that balsam of copaiba in the cold exerts no action on bicarbonate of potassium. The balsam of copaiba used in making the preparation above referred to was presumably the Maranham variety; it was obvious, however, that, as the copaiba balsams of commerce differ as widely in their characters as in their botanical sources, it would be desirable to experiment on well defined samples of known origin.

Authentic samples of Maranham and Para

* *Pharmaceutical Journal and Transactions*, Sept. 7th, p. 195.

balsams of copaiba and of Gurjun balsam having been obtained, were treated as follows:

In bottle No. 1 were placed 2½ fluid ounces of Maranham balsam of copaiba and ½ fluid ounce of the saturated solution of potassium carbonate.

Bottle No. 2 contained Para balsam of copaiba and saturated solution of potassium carbonate.

Bottle No. 3 contained Gurjun balsam and saturated solution of potassium carbonate.

Each of the mixtures, well shaken over night, showed signs the next morning of depositing. It was not, however, until five days had elapsed that the operation seemed complete.

No. 1 had by that time deposited a whitish layer of bicarbonate; over that lay a thin stratum of viscid resin, on the surface of which floated numerous small needle-shaped crystals; above that came the clear balsam, through which could be seen numerous crystals attached to the sides of the bottle. Neither layer was emulsible, although the lower one showed some tendency that way.

No. 2 differed altogether from the preceding. There was indeed the stratum of bicarbonate, but it was less in volume; the viscid resin was absent; the space occupied in the other case by clear balsam was here cleanly divided into two equal parts, the upper portion containing a pale-colored essential oil not miscible with water, the lower portion a saponified balsam of the usual character, except that it had a little more color.

No. 3 took a considerable time to settle down into three tolerably distinct layers; the lowest portion dark and dense, occupying about one-fourth of the space; the middle, of darker color still, but less abundant; the upper fluid both paler and thinner than the original Gurjun balsam. It was not emulsible.

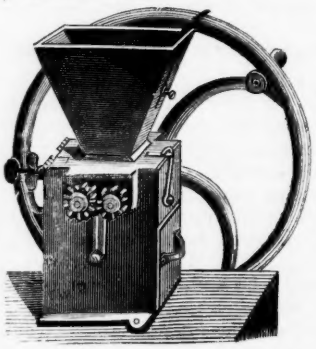
Another mixture was now prepared with 2½ fluid ounces of solution of potassium carbonate. This comported itself very differently from No. 1. It took much longer time to settle, and during the operation deposited neither crystals nor viscid resin. In fact the whole of the fluid portion was saponified and rendered readily emulsible.

It seems that, in order to prepare a perfectly miscible copaiba, the saturated solution of potassium carbonate must be added in proportion to the acid resins present in the balsam, and that experiment only can reveal what that proportion should be.

The peculiar behavior of the Para balsam in contact with the solution of potassium carbonate points to the existence of radical difference between it and the Maranham variety. Whether it be anything more than this, that it contains a larger quantity of essential oils than the saponified resin is capable of dissolving, further experiment must decide. The author thinks it must be something more, as he finds the essential oil of the Para balsam is not miscible with the completely saponified Maranham balsam, or with the saponified portion of the Para balsam, and it is in his opinion questionable whether or not the essential oil of copaiba is in any proportion soluble in the saponified balsam. In fact, he is inclined to regard the Maranham variety as a balsam, the Para variety as a balsam *plus* essential oil.

There are other varieties of balsam of copaiba known to commerce to which it might be interesting to apply this test, but it would be necessary to be quite sure about the identity and purity of the samples. Balsams of varied origin and also resinified essential oils might likewise be subjected to experiment.

For administration in capsules this miscible copaiba would seem to offer some advantages over the ordinary balsam. It would mix more evenly with the contents of the stomach and not float on the surface, causing pain and nausea. Moreover, the alkalies present would be beneficial in the class of cases for which balsam of copaiba is usually administered.



A New Drug-Mill.

THE firm of W. Schroeder & Co., machinists at Leipzig, have placed on the market a series of new drug-mills which have some decided advantages over those commonly in use at the present time. The grinding surfaces consist of two well-hardened geared cylinders, one large and one small, which have sharp oblique ridges, by which the grinding is performed. These may be set at any desired distance by means of screws. The hopper is of sheet-iron and contains an attachment kept in motion during the grinding, whereby the substance in the hopper is constantly shaken up and fed regularly to the cylinders. The mills may be taken to pieces without difficulty; but under ordinary circumstances this is unnecessary, as the hopper is hinged and may be turned to one side, thus exposing the cylinders. The larger sizes are also provided with belt and fly-wheels. For producing very fine powders, extra cylinders are supplied, which are less deeply and much more finely grooved than the others. Those who have used these mills speak very favorably of them.

RECENT PAPERS.

The Spontaneous Inflammability of Benzine.—MR. G. LINK, pharmacist in Lenzkirch (Baden, Germ.), has made some experiments on the liability of self-ignition of fabrics which have been washed with benzine.

He first developed hypochlorous oxide (or anhydride, Cl_2O), and suspended over it some silken rags moistened with benzine. Even friction with the hands brought about no ignition.

Having rubbed some potassium permanganate to powder in a mortar, he added some concentrated sulphuric acid, and afterwards, under stirring, a few drops of good benzine. A few jets of a bluish flame were noticed. The same experiment repeated with an inferior (low-boiling) benzine caused the latter to take fire and to burn with a smoky flame.

From these experients he concludes that fabrics washed with badly rectified benzine are liable to spontaneous ignition in presence of ozone or electricity.—*Gewerbeblatt aus Wuerttemberg*, 36.

Nigrosine-Ink.—(E. STOEMER.) The author has made experiments with a view to find a method for *fixing* nigrosine upon paper. [*Nigrosine*, which is an aniline color, has for several years been used extensively as a basis for black inks; it is very cheap, as it requires only 6 to 12 grains to an ounce of water, to make a jet-black ink. It cannot be readily destroyed by chemicals, but, as it does not penetrate the fibre of the paper, it can be washed off. The aim of the above author was to *fix* it permanently on the paper.] He found that there was a good deal of difference in the different samples of nigrosine obtained from different factories, only *two* being found capable of fixation. The best results were obtained with a Belgian product, termed "*Noir perfectionné*," by adding to it aluminium acetate.—*Pharmaceutische Zeitung*, Nos. 66–70.

Infusum Digitalis.—(D. E. PRALL.) The author finds that the turbidity in the officinal Infusum Digitalis is mainly caused by the tincture of cinnamon. On leaving this out, and substituting other corrigents of the taste, it was found that it either required too much of the latter, or that some other objectionable feature appeared. He finally concluded that a plain filtered infusion, without tincture of cinnamon, would be the best to dispense, as it would remain clear until the patient had used it up. The precipitate produced in the officinal infusion was examined for digitalis alkaloids, but none were found.—*American Journal of Pharmacy*, September.

False Pareira Brava.—(CHAS. MORRISON.) Giving the results of an analysis of a Brazilian "Pareira Brava," sold as genuine, but which answered neither to the description of *Cissampelos* nor to that of *Chondodendron*. It was found to contain two alkaloids, one of which resembled berberina, although differing from it in several important reactions. —*Ibid.*

Australian Fever Bark.—At a meeting of the Paris Société de Pharmacie, Mr. Petit reported the receipt from Australia of a quantity of Australian Fever-Bark (from *Alstonia constricta*), which was analyzed by Mr. Palm, who could find no alkaloid in it. Mr. Petit, however, subsequently obtained a liquid extract from it, which was precipitated by all alkaloidal reagents. Mr. Petit also stated that *Mahva Flowers*, from *Bassia latifolia* (East Indies), contained 40 to 50 per cent of sugar, which reduced alkaline copper solution.—*Journal de Pharmacie et de Chimie*, September.

Passage of Quinia through the System.—(J. PERSONNE.) The author denies the correctness of the assertions of other observers, who maintained that quinia was eliminated from the urine in a modified form, either as *dihydroxylquinia* (Kerner), or as *quinidia* (Guyochin). He ascribes the formation of these bodies to changes produced during the process of extracting the quinia from the urine. In this he appears to be correct, as he succeeded, by careful manipulation, and by the exclusion of chemicals likely to induce changes, to isolate from the urine pure quinia. His results are comprised in the following:

1. A large quantity of the quinia taken internally is destroyed during its passage through the organism.

2. Whatever is passed out through the urine is unaltered quinia.—*Ibid.*

Orange Flower Water.—Some report that orange flower water, which has been distilled by means of steam, after a while acquires a peculiar disagreeable secondary odor. This statement is replied to by others, who state that they are in the habit of allowing the product obtained in any one year to stand until the next year, when this disagreeable scent has disappeared.—*Boletin del Colegio de Farmaceuticos de Barcelona*, No. 9.

[We think it singular that no one has as yet undertaken the regular manufacture of orange flower water in our Southern States.—ED. N. R.]

Preparation of Bismuth Subnitrate.—(A. LALIEU.) In order to avoid the handling of large volumes of liquid, as well as the loss of bismuth by the production of soluble salts, the author proposes the following process, which, he says, yields a much larger, purer, and denser product:

200 grammes of bismuth are dissolved in a sufficient quantity of nitric acid; the clear solution is decanted and poured into about 8 litres of water, containing 500 grammes of water of ammonia. The precipitate is washed, transferred to a capsule, and 50 to 60 grammes of caustic soda, dissolved in a little water, are added to it. The capsule is then exposed for 15–20 minutes to the heat of a water-bath, and the contents stirred up several times. After having again become cold, the supernatant liquor is poured off, the precipitate is thoroughly washed, and a quantity of nitric acid, representing 48.5 grammes of anhydrous nitric acid (to be determined from the spec. grav., etc.) is added to it in small portions at a time, and under constant stirring. If, during this addition, the mass should become too thick, a little water may be added but not enough to destroy the pasty consistence of the mass. The capsule is then replaced for a few minutes on the waterbath, and the mass well stirred. The latter, which had been yellow, become soon perfectly white, and somewhat more liquid. It is then diluted with a little water, the precipitate collected on a filter placed on a muslin strainer, washed, drained, pressed, and dried. The product amounts to about 265 grammes.—*L'Union Pharmaceutique*, No. 8.

The Bark of the Guava Tree.—(G. FLEURY.) The bark of the guava tree (*Psidium pyriferum*) has been analyzed by the author, who found in it a very large quantity of calcium oxalate, namely, 30.77 per cent. It contains also 12.1 per cent of tannin, but no alkaloids.—*Ibid.*

Batiator-Root; a Substitute for Ipecac.—(STANISLAS MARTIN.) The author gives a description of this root, which is derived from a plant growing in Senegal. Seeds of it have been planted in the Museum of Natural History, at Paris, from which the plant will hereafter be determined. The root is identical in its effects with ipecac, in the same doses.—*Ibid.*

Detection of Foreign Coloring Agents in Wines.—A. DUPRE proposes the following method, based on the fact that the natural coloring matter of red wine does not dialyze through membranes, while most artificial colors pass through them. As it is, however, inconvenient to dialyze wine, a very ingenious modification is proposed: 5 gr. of gelatin are dissolved in 100 cc. of warm water; the whole is allowed to congeal to a jelly, and the latter cut into small cubes. One of these cubes is placed for 24–48 hours into a sample of the wine, then taken out, washed off, and laid upon a plate of glass or a piece of white paper. If the color of the wine was natural, the cube is dyed only at the surface, while, in presence of fuchsine, cochineal, logwood, Brazil-wood, indigo, red cabbage, red beets, or mallow flowers, the whole cube is penetrated by the color, characterized by a change in tint; fuchsine produces a magnificent red, red beets and cabbage

likewise a red, logwood a yellowish-brown, indigo a blue color.—*Ibid.*

Pyrogallic Acid in Psoriasis.—(Dr. A. Jarisch.) We have already in our July number, on page 208, given a résumé of some experiments made with pyrogallic acid as a substitute for chrysophanic acid in psoriasis. The author now reports his complete success in the treatment of this affection by the agent indicated. At first he used an ointment, containing 20 per cent of pyrogallic acid; this was, however, found to produce excoriations. Hence, he has reduced the ointment, as ordinarily used, to the strength of 10 per cent, and in some cases he uses it only of 5 per cent. If spread on muslin, and then applied, it must be still further diluted, otherwise it acts as an irritant. Aqueous solutions should contain about 1 per cent.

Pyrogallic acid acts not as rapidly as chrysophanic acid, but it is equally certain in its results.—*Pharmaceutische Post.*

Eucalyptus Oils.—J. Bosisto, of Richmond, Melbourne, Victoria (Australia), prepares a number of products from the Eucalyptus trees on a large scale. By distillation of the leaves and young twigs, he obtains a series of essential oils, first observed by Ferd. v. Mueller, in 1854, Johnson in 1862, etc. The following species yield the most important ones:

Eucalyptus amygdalina. Essential oil, pale-yellow, thin liquid. Odor penetrating, resembling somewhat oil of lemon. Taste mild and cooling, afterwards bitter. Spec. gr. 0.881 at 15° C. Boils at 165–188° C., deposits a stearopten at 18°. Resinifies when exposed to air.

E. oleosa. Oil thin, mobile, pale-yellow; of mild, camphorlike taste, somewhat resembling oil of turpentine. Odor mint-like. Sp. gr. 0.911. Boils at 161–177° C.

E. Sideroxylon. Oil very pale-yellow, thin. Odor and taste like preceding. Sp. gr. 0.922. Boils at 155–178° C.

E. Goniocalyx. Oil pale-yellow, of penetrating pungent, disagreeable odor. Taste very disagreeable. Sp. gr. 0.918. Boils at 152–175° C.

E. Globulus.—Oil thin, very pale-yellow. Odor like oil of cajuput, but less agreeable. Taste cooling, mint-like. Sp. gr. 0.917. Boils at 149–177° C.

E. corymbosa.—Oil colorless, odor faintly lemon and rose-like, taste feebly bitter, slightly camphoreous. Sp. gr. 0.881.

E. obliqua.—Oil yellowish-red. Odor mild, taste bitter. Sp. gr. 0.899. Boils at 171–195° C. Becomes cloudy at 18° C.

E. fissilis.—Oil pale yellowish-red. Odor like preceding. Sp. gr. 0.903. Boils at 177–196° C.

E. odorata.—Oil pale yellowish, with a greenish hue. Odor aromatic. Sp. gr. 0.899–0.922. Boils at 157–199° C.

E. longifolia.—Oil thicker than others. Taste cooling and aromatic; odor strongly camphoreous. Sp. gr. 0,940. Boils at 194–215° C.

E. rostrata.—Oil pale-yellow to amber. Odor and taste as preceding. Sp. gr. 0.918. Boils at 131–181° C.

E. viminalis.—Oil pale greenish-yellow. Odor disagreeable but feeble. Sp. gr. 0.921. Boils at 159–182° C.—*Zeitschrift d. Oester. Apoth. Ver.*, Nos. 24–26.

Vaginal Suppositories.—(Ed. Rennard.) These are mostly prepared by melting together the required ingredients and pouring them into suitable forms, in order to let the mass solidify. A very good vehicle is a mixture of water, gelatin, and glycerin, which will, however, only retain its transparency if the water is all evaporated off. The proportion is 1 part of gelatin to 6 of glycerin, which may require modification according to the concentration of the glycerin, the weather, or the other ingredients. Almost all substances may be incorporated with this mass, without undergoing alteration; only tannin enters into an insoluble compound with gelatin.

An admirable substitute for the latter is *agar-agar.* This is a species of gelatin prepared in Japan from various algæ, chiefly *Fucus Amansii*, which is free from nitrogen, occurs in the market in quill-shaped shreds, and is used exactly like animal gelatin. It absorbs a very large quantity of water, 1 part of it still yielding a tolerably solid jelly with 60–70 parts of water. According to Prof. E. Reichardt, in Jena, agar-agar consists of pararabin, a carbohydrate, which is also valuable as a nutriment. It dissolves in boiling water, and yields arabic acid after sufficient digestion with alkali.

To prepare vaginal suppositories, a jelly is made from 1 part of agar-agar and 30 of water. This, however, has a turbid, milky look. If it is desired transparent, the mixture should contain 1 part agar-agar, 10 parts glycerin, and 20 parts water. The agar-agar is allowed to soak in water over night, of which it takes up about 20 parts; it is then heated until liquid, and the glycerin added. With glycerin alone it forms no jelly, but a tough transparent mass. Any desired quantity of tannin may be added to the jelly, without being rendered insoluble.—*Pharmaceutische Zeitschrift f. Rusland*, Nos. 14–15.

Cinchonichine, a new Alkaloid of Cinchona.—(Drygin, Mag. Pharm.) The property of urea to enter into compounds with the alkaloids belonging to the *quinia*-group, while this does not occur with those belonging to the *cinchonia*-group, led the author to the discovery of a new [artificial?] alkaloid of cinchona. [See p. 334.] Its chief characteristics are:

It is extremely soluble in chloroform (cinchonidia only with difficulty), less so in ether (but still more readily than cinchonidia). The neutral sulphate is as little soluble in water as the corresponding salt of quinia, etc.

The author found 6 per cent of this alkaloid in sulphate of quinia, less in the hydrochlorate, and particularly little in the latter salt, the whiter it was.

The alkaloid is obtained from the last residuary mother-water left after the crystallization of the hydrochlorate of quinia and urea. The brown syrup is dissolved in water, and the alkaloid separated by supersaturation with ammonia. The washed and dried precipitate is treated with ether, then dissolved in the least possible quantity of chloroform, and the solution filtered from any remaining cinchonidia. After the chloroform is evaporated off, the alkaloid is converted into sulphate, and purified by recrystallization. This process may be repeated, and the alkaloid either obtained free or as sulphate.—*Ibid.*

Falsification of Codeine.—The statement is made that "codeine" occasionally occurs in the (Spanish) market contaminated with, or entirely consisting of hydrochlorate of morphia, which may be readily recognized by the usual tests. It is also said to occur mixed with crystallized *sugar.* We remember having seen a similar statement a number of years ago. It is not unlikely that both sophistications have only existed in the imagination of some would-be discoverer.—*El Restaurador Farmacéutico* (*Barcelona*), Nos. 16–17.

Granular Effervescent Tartrate of Soda.—Dr. P. E. Allessandri uses the following formulæ, according to *L'Orosi*, 1878, No. 9: It is, of course, well known that a good deal of the commercial so-called "citrate of magnesia," whether liquid or granular, consists of tartrate of soda, with or without the addition of other ingredients. The above-mentioned author even publishes his formulæ under the title of "Granular Effervescent Citrate of Magnesia," although he explains the misapplication of the term. We could not, however, follow him in this instance.

1.	Tartaric acid	100 parts.
	Sodium bicarbonate	118 "
	Sugar, in very fine powder	100 "
	Citric acid, powdered	30 "

Reduce every ingredient to a very fine powder, by itself, then mix the first three in a large porcelain mortar intimately, pass the mixture through a sieve, add the citric acid, again mix and sift, transfer it to a jar, cover it with a sheet of white paper, and compress it with the hand. After about an hour, the particles of the mixture will somewhat agglutinate. The mass is now loosened with a

wooden or glass spatula, and poured into another bottle, where it is agitated with a sort of rotation for about five minutes. The vessel is then set into a warm place, until the product is thoroughly dried, when it will appear in form of uniform but angular grains, of great whiteness, and readily soluble, with a prolonged and persistent effervescence.

II.	Tartaric acid	100 parts.
	Sodium bicarbonate	92 "
	Sugar, in very fine powder	95 "
	Magnesium carbonate	50 "
	Citric acid, powdered	60 "

The mixture is made as in the preceding formula. The product is more rapidly soluble, and does not effervesce so long.

A much more intimate mixture and better granules may be prepared by the following formula:

III.	Tartaric acid	120 parts.
	Sodium bicarbonate	100 "
	Sugar, in very fine powder	80 "
	Absolute alcohol	q. s.

Mix the ingredients, previously well dried, and in fine powder; moisten them, in a porcelain mortar, with absolute alcohol, and triturate them thoroughly. Then spread the mass, while still damp, in a layer of about $\frac{3}{8}$ inch high, upon a slab, exposed to a moderate heat, until tolerably dry. Remove it, triturate again until the desired granules are obtained, sift, if so desired, and keep for use.

Preservation of Anatomical Specimens.—P. TORINETTI directs them to be injected with a solution of 50 parts of benzoic acid in 1,000 parts of alcohol and 50 parts of ether. They are then to be dried at a temperature of 70 to 80° C., and at a pressure of 3 to 7 atmospheres.—*Chemiker Zeit.*, 2, 1878, 236.

Chloral-Hydrate and its Misuse.—Although it is no doubt true that a large quantity of chloral-hydrate is used illegitimately for similar purposes as opium and chloroform, the charge made by the *Deutsche Industrie-Zeitung*, "that a large proportion of the so-called 'drinks,' which are sold in America [meaning the U. S.], contain chloral hydrate," is entirely unfounded, and about on a par with the statement that $\frac{9}{10}$ of American hams contain trichinæ.

To plate Metals with Platinum.—Hitherto this has been attended with but indifferent success, as the coating was generally too thin, or soon pealed off. Prof. Bœttger has, however, found that by dissolving the double chloride of platinum and ammonium in a boiling strong solution of neutral sodium citrate, a deep orange-red liquid rich in platinum is produced, which deposits, by means of two large Bunsen elements, a beautiful homogeneous coating which does not peel off.

It will perhaps now be possible to produce all sizes of *platinized dishes and crucibles* for chemical purposes.

Complete Separation of Albumen from Animal Liquids.—(DR. FRANZ HOFMEISTER.) The method hitherto generally followed consisted in boiling the liquid, previously slightly acidulated. It is, however, known that it is impossible to effect the complete separation of albumen, under all circumstances, by this process. Dr. Hofmeister has found that the following method effects an absolutely complete separation. The albuminous liquid having first been deprived of as much albumen as possible by the ordinary process, the filtrate is then mixed with hydrated oxide of lead, boiled a few minutes, and again filtered. The liquid is deprived of lead by sulphuretted hydrogen, and the excess of the latter is removed by boiling. The residuary liquid will then be absolutely free from albumen.—*Zeitsch. f. physiol. Chem.*, II., 288.

A New Test for Glycerin.—(A. SENIER and A. J. G. LOWE.) Iles' discovery that glycerin appears to act like an acid upon borates, liberating the boracic acid, which may then be infallibly recognized by the flame-test (see this journal, 1876, p. 327), suggested to the authors that the test may be reversed, and used for the detection of glycerin. This is accomplished in the following manner: The aqueous solution to be examined is first made slightly *alkaline* with dilute soda solution, and a borax bead is dipped into it. The bead is allowed to rest for a minute or so, to allow solution to take place on its surface. Then it is held in the Bunsen flame, and if glycerin is present, it will show the characteristic color distinctly. A still more delicate method is to place a little powdered borax on a watch-glass, and to pour on it some of the solution made faintly alkaline. Stir with a glass rod (the mixture becomes acid, of course), and by means of a looped platinum wire introduce some of the mixture into the flame. In either case the deep-green color appears more or less distinctly if glycerin be present in sufficient quantity. The same reaction as with glycerin is obtained with erythrite and glycol—which, therefore, must be absent. One per cent of glycerin in water, beer, wine, and milk was still recognized. It is best to exhaust the substance, or the residue left on its evaporation, with absolute alcohol, and to apply the test to the residue left by the latter.

But as ammonium salts are also capable of liberating boracic acid, they must be removed before using the test, which is best done by evaporating the liquid to be examined to dryness, adding saturated solution of sodium carbonate, and heating on the waterbath until no more ammoniacal vapors are given off. The residue is then exhausted with absolute alcohol, and tested in the above manner.—*Journ. Chem. Soc.*, Sept., 1878, 438.

Analysis of Licorice Root.—F. SESTINI has analyzed licorice root, both fresh and dry, with the following results:

	Fresh.	Dried at 110°.
Water	48.700	——
Fat, resin, and coloring matter (sol.) in ether	1.650	3.220
Glycyrrhizin	3.271	6.378
Starch, etc	29.620	57.720
Cellulose	10.150	19.790
Proteid matters	3.267	6.373
Ammonia (present as salts)	0.022	0.043
Asparagin* salts	1.240	2.416
Ash	2.080	4.068

—*Gaz. Chem. Ital.*, 8, 131.

Mosandrium, a New Metal.—PROF. J. LAWRENCE SMITH, of Louisville, some time ago announced the discovery of a new element belonging to the cerium-group, to which he gave the above name, in honor of the Swedish chemist Mosander. The oxide, mosandria, from which the metal was prepared, differs from the other members of the group (yttrium, etc.) by its behavior towards potassium sulphate; from oxide of cerium by its solubility in dilute nitric acid, and in alkalies supersaturated with chlorine; from oxide of lanthanum by the color of its salts, and from oxide of didymium by peculiar dark bands in the lighter parts of its spectrum.

Another Invisible Postal-Card Ink.—On page 96 of our last volume will be found an account of several liquids which may be used for this purpose. Prof. Böttcher has lately recommended another, namely, a mixture of 1 part of sulphuric acid with 50 parts of water. The writing is to be done with a quill, and will be, when dry, entirely colorless and invisible; but on heating carefully over a flame, or by laying on a hot oven, it will appear in deep black characters.

Coagulated Petroleum.—If powdered soapwort (root of *Saponaria officinalis* L.), previously wetted with water, be added to petroleum, no matter how light its density, the two substances form a thick mucilage, so that the vessel containing the mixture may be inverted without any of it flowing out. On adding a few drops of carbolic acid and stirring, the mucilage becomes clear in a few minutes.

* The nitrogen present, otherwise than in ammonia or proteids was calculated as asparagin.

Pelletierine, the Alkaloid of Pomegranate Bark.—(CH. TANRET.) To prepare this alkaloid (previously mentioned by us, page 278) in a pure state, its ethereal solution is distilled in a current of hydrogen; the residue is then heated at 130–140° C., until no more vapor of water is given off. The temperature is then raised, and the liquid distilling over at 180–185° C. represents the pure alkaloid. It is colorless, but becomes rapidly colored on exposure to air. Its sp. gr. at 0° C. is 0.999; at 21° C., 0.985. It is very soluble in water, with contraction of volume. It turns the polarized ray to the right. With sulphuric acid and potassium bichromate it gives as intensely green a color as alcohol. Its ultimate composition is $C_{16}H_{13}NO_2$ (Tanret). It forms crystallizable salts with sulphuric and hydrochloric acid.—*Rép. de Pharm.*, 1878, 389.

Permanganate of Zinc.—A. KUPFFER states that the commercial salt, which is always sold in solution, instead of containing 25 per cent, as is claimed, only contains about 10 per cent at most, and is contaminated with chlorides. He adds that it should be prepared by Gustavsen's method, namely, by decomposing barium manganate with dilute sulphuric or with carbonic acid, and mixing the barium permanganate thus produced with an equivalent quantity of zinc sulphate. The strength of the solution of zinc permanganate should not exceed 10 per cent, or 48 grains per ounce.—*Pharm. Zeitsch. f. Russl.*, 1878, 481.

Piney Tallow, or Vegetable Butter of Canara.—G. DAL SIE has examined this substance, which is a fatty matter obtained from the fruits of *Vateria Indica* L., growing on the coast of Malabar, which tree is the chief source of the white *damar* met with in the bazars of southern India. He found it to be a mixture of *free* palmitic acid (75 per cent), and *free* oleic acid (22.8 per cent), besides a small quantity of impurities, etc. No volatile acids or glycerin could be detected. It may be bleached, whereby the melting point is raised so that it may be made into candles.—*Gaz. Chim. Ital.*, 8, 107.

Ethyl Iodide.—Mr. Yvon finds Personne's process for the preparation of this substance the best. Five parts of red (amorphous) phosphorus and 60 parts of 95 per cent alcohol are introduced into a tubulated retort, the beak of which immediately enters into the neck of the receiver standing in ice; 20 parts of iodine are then introduced, and, after waiting a few minutes, a second portion of 20 parts. Gentle heat, by means of a Bunsen burner or an alcohol lamp, is then applied. Bumping of the liquid is prevented by the previous introduction into the retort of some twisted platinum wire or ribbon. The whole is distilled to dryness. The distillate, which is more or less yellow, is deprived of free iodine by shaking with a solution of an alkaline carbonate; the colorless ether is then decanted, rectified, and, to free it from traces of water, once more distilled from fused chloride of calcium.—*La Ruche Pharm.*, 1878, 145.

Aluminium Acetate as Antiseptic.—GANNAL, in 1827, found that a solution of aluminium acetate prevented putrefaction, and used it for embalming. In 1857, Burow employed it for the antiseptic treatment of wounds; but it has only lately been again brought to notice by Prof. Paul Bruns, who confirms its superior antiseptic properties. He regards it as fully equal to, if not superior to thymol and carbolic acid, over which it has the further advantage of *not* being poisonous. In dilute solution, he recommends it for continuous irrigation. The strongest solution used by Prof. Bruns contains 3 per cent, prepared with 72 grammes of alum, 115 gm. of lead acetate, and enough water to make 1 litre. For continuous irrigation, it is diluted with 3 to 6 times its volume of water, in which case it contains 1–½ per cent. The liquid does not injure or corrode brass or steel instruments.—*Pharm. Centralh.*, 1878, 361.

Detection of Resin in Beeswax.—(E. SCHMIDT.) The frequent adulteration of yellow beeswax with resin [in Europe; if in this country?—ED. N. R.] has led the author to devise an improved method for its detection. Five grammes of the wax are heated to boiling in a flask with 4–5 times its weight of ordinary nitric acid, sp. gr. 1,320–1,330, for one minute; an equal volume of water is then added, and enough ammonia (with frequent shaking) to cause the liquid to strongly smell of it. The liquid is then poured off from the separated wax into a cylindrical vessel, when it will have a pure yellow color, if the wax was pure; but, if it was adulterated with resin, it will have a more or less intense red-brown color. It is best to make a separate trial with wax of known purity, and to compare the tints. One per cent of resin is easily detected by this process.—*Arch. d. Pharm.*, Sept., 1878.

Mechanical Purification of Mercury.—(G. VULPIUS.) Considerable quantities of mercury are used in laboratories for experimental purposes, such as confining gases, in safety-tubes, etc., etc. In the course of time, this mercury takes up a large amount of extraneous matters and impurities, which it is very difficult to get rid of. The author points out a simple way to restore to it its former brightness. A strong plaited filter is perforated in its lowest point with about ten holes, by means of a coarse needle, and the mercury poured in. As long as the filter is pretty full, the metal will run through without difficulty. When it ceases to run freely, the funnel is to be shaken, until, finally, only a small quantity (1–2 per cent) of it remains on the filter, which contains all the foreign matters. The filtered mercury—provided it has not taken up any foreign metals—will be as bright and clean as when freshly distilled.—*Arch. d. Pharm.*, Sept., 1878.

Fragmentary Notes on Opium.—(B. S. PROCTOR.) The writer pointed out the dangerous variation in the strength of commercial opium, the general run of samples varying from 4 per cent of morphia to 12 per cent, not to mention exceptional specimens which show still greater divergence. Having pointed out that the drug is essentially variable in its character, and consequently that no definition of purity could be satisfactory, a more strict definition of strength than that adopted in the pharmacopœia was advocated.

It was shown that commercial samples include varieties which are hygroscopic, and others which become crumbly and mouldy, but that none of these physical properties can be taken as indications of either good or bad quality. It was further shown that the officinal processes for extract of opium, and liquid extract of opium, do nothing towards remedying these defects, the extracts being liable to vary among themselves in a degree still greater than the variation in the quality of the crude drug from which they have been prepared. The standardizing of opium was strongly advocated, and it was pointed out that the liquid extract would become a much more satisfactory preparation if made direct from a standard opium, and the quantity of the product so regulated that a fluid ounce of the liquid extract should contain three grains of morphia. This would correspond with four grains of acetate of hydrochlorate of morphia as contained in the officinal solutions of morphia and also pretty closely with the average strength of the liquid extract of opium as found in commerce.

Under the head of analysis, the writer drew attention to the difference of solubility of morphia and its meconate under treatment with benzine, and stated that when treating opium in considerable quantities in connection with Swan & Proctor's patent, he failed to find any morphia or codeia extracted by benzine, though in a process of analysis free morphia, in presence of a large proportion of narcotine, was taken up in small but appreciable quantity by the same solvent. The difficulty experienced by Professor Flückiger in completely extracting the narcotine from opium for analysis received a probable explanation in the writer's observation, that though, in the absence of free acid, this alkaloid is readily dissolved by ether, chloroform, or benzine, it is but little acted on by these menstrua when present in an opium having a strongly acid reaction.—Brit. Pharm. Conf. From *Chem. and Drugg.*

Soluble Essence of Ginger.—(J. C. THRESH.) Requiring some time ago a strong solution of the active principles of ginger, which would mix with water or syrup without causing turbidity, the author made a number of inquiries and experiments, the results of which are detailed in the following:

He found that most wholesale drug houses made and kept in stock a so-called soluble ginger essence, but in many cases the pungency was due to cayenne, and (with one exception) the pleasing aroma of ginger was wofully deficient. He also obtained several recipes for this essence, but none of them gave satisfactory results. One ordered the powdered root to be percolated with a dilute alcohol, another with a mixture of spirit and glycerin, a third ordered a strong decoction of the ginger to be fortified and preserved by the addition of a weak tincture of cayenne, etc.; but not one of them yielded a result possessing the full flavor and odor of the ginger from which it had been prepared.

Thrown upon his own resources, the author devised the following process, which yields a satisfactory preparation and entails but little trouble.

Take of finest Jamaica ginger in powder 1 lb., pour upon this 8 ounces of rectified spirit, and after allowing it to stand for several hours add more spirit; percolate to 16 ounces. To this adds 2 ounces of heavy carbonate of magnesia, agitate, and add 24 ounces of water; shake well, and filter. If the filtrate is turbid, the whole must be well shaken with a little more magnesia, and again filtered. The filtrate possesses all the aroma of the ginger and a fair share of its pungency, and is of a pleasing yellow-brown color. After keeping a few days it becomes turbid and deposits slightly, but if again filtered appears to continue clear.

The action of the magnesia is partly mechanical, partly chemical, for the peculiar tint of the essence is undoubtedly due to the action of the hydrate of magnesia upon the ginger resin, and the precipitate which forms soon after the essence is first made is a compound of resin and magnesia. Mr. Thresh had suspected that the resin left in solution differed from that removed; but, upon evaporating the soluble essence and examining the resinous residue, he could detect no difference between them.

He has since found that calcium sulphate, calcium carbonate, and charcoal powder, are equally efficacious in removing the excess of resin, but the resulting solution is in all cases much paler in color; and probably when charcoal is used the odor may not be so strong. These, no doubt, act mechanically, causing the aggregation of the resin precipitated by the water, hence it is probable that any fine inert powder will answer as well as the magnesia.

A syrup made by mixing equal quantities of strong simple syrup and soluble essence is very suitable for using with gazogenes, and a weaker syrup might with advantage replace the unsightly preparation of the Pharmacopœia.—Brit. Pharm. Conf. From *Chem. and Drugg.*

Nitrite of Amyl.—(D. B. DOTT.) This paper embodied the results of an examination of several samples of nitrite of amyl procured from different makers, with the view of ascertaining the degree of purity of the article in the market. The samples examined had a specific gravity varying from .864 to .876, the proper specific gravity being .877. By a single rectification they gave a yield of 6.7, 11.5, 33.3, 47.5, and 65.0 per cent respectively, boiling at 90° to 100° C., while a sample prepared by the author in the ordinary way gave 85.0 per cent. One of the samples had an odor quite distinct from that of genuine nitrite of amyl, and produced little effect on the heart's action by the inhalation of its vapor. It will thus be seen that there is a great variation in the quality of the amyl nitrite of different makers, and that some of it is of very inferior quality. The author considers that some standard of purity less rigid than that of the Pharmacopœia ought to be adopted, as it is impossible to prepare a nitrite of amyl boiling constantly at 205° F. Indeed, there seems to be some doubt as to whether that is really the correct boiling point. The process for preparing nitrite of amyl, by passing nitrous acid gas through amylic alcohol, is held to be the best, being decidedly preferable to that by the direct action of nitric acid on the alcohol.—Brit. Pharm. Conf, *Chem. and Drugg.*

Note on Beberia.—(D. B. DOTT.) The author announced that he had obtained a crystalline hydrochloride of beberia (bibirine), all the salts of that base previously described having been amorphous. The author expects, by an examination of the salt and the alkaloid precipitated therefrom, to make sure of the composition of the latter, about which there has been some doubt.—Brit. Pharm. Conf., *Chem. and Drugg.*

Note on an improved Preparation of Ergot.—(A. W. POSTANS.) The author considered the liquid extract which he brought before the Conference an improvement on the process given the U. S. Pharmacopœia, and possessed of stability, activity, and good keeping power. The process is as follows:—

To 20 ounces of freshly-powdered ergot packed in a percolator, the extremity of which had been closed, is added a mixture containing 10 ounces each of rectified spirit and glycerin, and 5 ounces of water, the whole allowed to macerate for a week, at the expiration of which time the percolation is proceeded with, and the subsequent displacement continued with distilled water until the drippings almost cease to have any taste or color. Eighteen ounces having been collected of the first liquid, the remainder is evaporated gently in a water-bath to 2 ounces, and then mixed with previous quantity, so that 20 ounces of this fluid extract exactly represent 20 ounces of freshly-powdered ergot. Several obstetricians of eminence have found this preparation highly satisfactory.

Mr. Postans remarked that the main difference between the above process and the American consists in the addition, by the U. S. Pharmacopœia, of half an ounce of acetic acid to each 16 ounces of liquor, thus rendering in his opinion an otherwise good preparation nauseous and unpalatable, as well as presenting a doubt as to the desirability and wisdom of introducing acid into the stomach of patients. [This statement is not borne out by the experience of the medical profession in the U. S., where the officinal fluid extract, prepared according to the Pharmacopœia of 1860, is considered the best preparation of ergot available for obstetrical practice.—ED. N. R.] —*Ibid.*

Notes on various Samples of Dialyzed Iron.—(R. REYNOLDS AND C. H. BOTHAMLEY.) The authors referred to the fact that so far back as the Nottingham meeting of the Conference in 1866, Dr. Wagner, of Pesth, exhibited a specimen of Ferrum Dialysatum, and also remarked that for the ten years which followed it had been absent from the literature of British pharmacy. They quoted some French and American authors, and gave the following as the results which they had themselves obtained:—

	Source	Reaction	Sp. gr.	Fe_2O_3 per cent.	Cl. per cent.
I.	London, M	Neutral	1.0439	4.707	0.206
II.	German	Acid	1.0572	5.866	0.219
III.	Fer Bravais	Neutral	1.0316	3 430	0.194
IV.	London, H	Neutral	1.0360	4 484	0.051

All the samples but No. 2 were described as almost tasteless. No. 2 had a marked chalybeate flavor, and gave a distinctly acid reaction to test-paper, having also the highest sp. gr. of any of the specimens. Its percentage of ferric oxide is also higher than in any other case, in fact exceeding that which is theoretically possible. This sample had been offered at a much lower price than any other, and the authors were disposed to agree with Prof. J. M. Maisch, who had described a similar preparation imported from Germany, and which he regarded as made by saturation alone or by imperfect dialysis. The authors thought that the reaction towards test-paper should always

be noticed, and such samples rejected as reddened litmus paper. The litmus paper must be carefully washed under a stream of water.—Brit. Ph. Conf., *Chem. and Drugg.*

The Titration of Hydrocyanic Acid and Cyanides, and its Relation to Alkalimetry.—MR. SIEBOLD read a paper at the late Brit. Pharm. Conf., in which he showed that Liebig's volumetric test for hydrocyanic acid by solution of silver nitrate was liable to error by the difficulty of ascertaining precisely the moment when the conversion of the acid into cyanide was complete. But he recommended as a modification of that test the following process. The acid is allowed to run from the pipette into an excess of solution of sodium hydrate; decinormal solution of silver nitrate is then added drop by drop until a slight opalescence is produced, and this point being attained, standard normal hydrochloric or sulphuric acid is added until the opalescence begins to increase, which does not take place until the whole of the free alkali is neutralized. For each cc. of standard mineral acid thus required 0.01 cc. should be deducted from the volume of the silver solution used, and the remainder calculated for HCy. Mr. Siebold also showed how this process was suitable for the estimation of the alkaline carbonates. —*Chem. and Drugg.*

Adulteration of Drugs.—CHAS. R. C. TICHBORNE, in discussing this question, regards the British Act regarding Adulteration of Drugs and Chemicals to be a failure so far as it relates to the former. Although the more expensive articles—such as quinia, saffron, scammony, silver nitrate are commonly supposed to be most liable, the cheaper drugs, he thinks, are quite as often spurious, and he cites powdered hematite, phosphoric and nitric acid, flax-seed, the latter containing skins of grapes, stones, etc., from the wine press; powdered colocynth, containing both rind, seeds and pulp and presenting commercially from 14 to 2½ per cent of active principle. Regarding the bearing of the adulteration in question upon the practice of medicine he stated that he had samples of English atropia six times the strength of others in the market of German manufacture. Concerning the moral view of the question, the reform is in the hands of the Pharmaceutical Chemists, from whom the Public Analysts should be selected and upon whose sense of honor the public must depend in this matter.—*Med. Press and Cir.*

Chloride of Ammonium in the Treatment of Hepatic Disease.—WILLIAM STEWART writes to the *British Med. Jour.* of Sept. 28th, his experience regarding the use of this remedy in the hepatic affections of India. The effects are more decided in enlargement dependent on active congestion than on chronic hepatitis and are very remarkable. The account given on page 177 of NEW REMEDIES corresponds with the one here given and will obviate the necessity for repetition.

Nitrite of Amyl in Sea Sickness.—CROCHLEY CLAPHAM, under date of July 29th, says that since the report of cases by him in 1875 he has received many letters from persons who have derived relief from amyl nitrite. Regarding the quantity and mode of use he recommends that it be carried in capsules to prevent evaporation and loss, and says that almost any amount may be inhaled by a healthy person, while under no circumstances would he administer it to a person suffering from arterial disease. A point worth noting in its administration is the necessity for excluding air, excepting so much as may penetrate the saturated portion of a handkurchief from which it should be inhaled.—*Lancet.*

Arsenical Preparations as Cosmetics.—The EDITOR of the *Med. and Surg. Rep.* calls attention to the increasing use in this country of arsenic internally as a cosmetic; being taken to increase the flesh and improve the complexion, he quotes from the secular press the experience of a writer who made a personal of investigation of the case and reported that Fowler's, Donovan's, and De Valangin's solutions were easily obtainable in spite of the law. A syrup of the arseniate of iron (a French preparation) has come into use and is claimed to produce all the good effects for which arsenious acid is taken, without its risks. Another preparation is Barboulé's arsenical water which is asserted to have the same effects as arsenious acid granules which are also largely in demand. A Baltimore firm sells large quantities of "sulphide of arsenicum" by the use of which, so they say, "your complexion will be made to rival the lily and the rose." It, likewise, is taken internally and, strange to say, is avowed to be "absolutely harmless," and the proprietors, in response to letters of inquiry about it, assure women that it "contains no arsenic."

The experiments of Geis are quoted and show that the first stage, where animals were the subjects, was to increase the size and weight, and the strength of the bones, the fat being markedly and uniformly increased. With increasing doses chemic arsenicism became evident. A curious fact observed by Geis was that a like series of changes in less degree occurred in animals confined in the same room with the subjects of the experiments, explainable, he thinks, by the absorption of arsenic eliminated from the lungs and skins of the latter.—Aug. 31st.

Aloes.—JOHN MORRIS, M.D., remarks that Barbadoes aloes should be prescribed with caution, and a gentle aperient action follows its administration in small doses combined with alkalies or vegetable extracts. Furthermore it is not commonly known that an increase in quantity beyond a medium amount is not attended with corresponding effect.—*Med. and Surg. Rep.*, Sept. 17th.

Belladonna in large Doses in Intestinal Obstruction.—Following the perusal of a paper by Mr. Macrae published in January, 1873, DR. NORMAN KERR, of London, has used belladonna in doses of one and two grains repeated every hour in five cases of intestinal obstruction after other measures had been resorted to without effect. 9, 9, 12, 14, and 16 grains were administered respectively in each case, and the time intervening between the commencement of the treatment and its cathartic effect varied between 7½ and 9 hours.—*Br. Med. Jour.*, Aug. 31st.

Belladonna as a Cardiac and Respiratory Stimulant.—The Editor reviews the recent literature of this subject with a view to encouraging attention to the knowledge which has been accumulated within a short time. The influence it exerts upon the secretion of milk, the perspiration of phthisis and as an antidote to opium are briefly alluded to, while its effect in raising the arterial pressure through its influence on the heart is illustrated by Fraser's experiments on the Calabar bean. Frazer, Harley, Wood and Fothergill are quoted regarding its value as a respiratory stimulant. [Much of the information here given may be found in the very interesting monograph by Fothergill on the Antagonism of Therapeutic Agents noticed by us in October.]—*Med. Press and Cir.*, Aug. 25th.

Bedford Alum and Iron Springs.—WM. ALEX. GREENE, M.D., of Macon, Ga., recommends these waters in malarial affections, and especially in malarial hematuria or hemorrhagic malarial fever. From an advertisement which faces Dr. Greene's article we learn that the chief mineral constituents of the water are aluminum, iron, magnesium, calcium, sodium, potassium, lithium, and ammonium, but their proportions or combinations are not stated.—*Cinn. Med. News.*

Subnitrate of Bismuth Contaminated with Arsenic.—J. W. UNDERHILL, M.D., who advocates the use of bismuth in intestinal affections in large doses, gave in eleven days to his child, ten months old, about four hundred grains of subnitrate of bismuth. When the child had been about a week under treatment, it was noticed to be gaining flesh very rapidly. Within a short time his limbs and face became puffy, and within a few days later enormously swollen; he had injected conjunctivæ, disuria; had a hot, dry skin, and was restless and apparently suffering much discomfort. Stoppage of the bismuth was followed in a few days with amelioration of these symptoms, and the presence of arsenic in the bismuth was suspected. Inquiry of the druggist discovered that the bismuth was the product of a large manufacturer, and an

analysis of the contents of the package showed that it contained arsenic in the proportion of $\frac{1}{100}$ of one per cent. Examination of a second and original package of the same manufacturer showed the presence of $\frac{44}{100}$ per cent [$\frac{44}{100}$ of 1 per cent?—ED. N. R.] of arsenic in it, or a little more than $\frac{1}{4}$ grain in every thirty grains. Calculation shows that $\frac{1}{8}$ of a grain of arsenic had been taken by the infant. Since arsenic acid is the form most common in bismuth preparations, and as this is much more active than arsenious acid, the facts above enumerated are of the highest importance. The writer concludes his paper with a résumé of the laws regarding the legal liabilities of manufacturing and dispensing pharmacists in such and similar cases.—*Lancet and Clinic.*

"Bear Wallow" Spring—Orkney Springs, Va.—E. F. CORDELL, M.D., says that the primeval bears of the Virginia mountains were the first to resort to the mud baths of these springs, and that about fifty years ago the waters were first used by the human residents in the treatment of scrofulous and cutaneous affections. The temperature of the water is about 58° Fahr., and the supply, though not copious, is sufficient. It is acid and of a pleasant and ferruginous taste. The chief ingredients are sulphates of iron and magnesia, in the proportion of five and a half and three grains to the gallon respectively. There are traces of arsenic and cupric sulphate. In composition the water resembles that of the Bedford Springs, Pa. The elevation above tide-water is 2,300 feet. The affections most benefited by the water are dyspepsia, chronic skin diseases, all conditions attended by anemia and debility, constipation, and chiefly female uterine and pelvic disorders.—*Maryland Med. Journ.*

Poisoning by Cyanide of Silver.—DR. BURROWS reports an attempt at suicide by a young man of intemperate habits who took an equivalent of 30 grains of a solution of cyanide of silver, of a strength of at least 30 grains to the ounce of water, such as is used by silver-platers. The symptoms were difficult breathing, lividity of countenance, engorgement of conjunctiva, imperceptible pulse, sense of constriction at throat, stomach, and region of heart, odor of cyanhydric acid, and slight frothing at mouth. The treatment consisted of tincture of iron, followed by emetics, common salt, and sweet oil. After emesis, tea, extract of beef, and whiskey were given. The patient recovered, but suffered from delirium tremens.—*Canada Lancet*, September.

Cannabis Indica in the Treatment of Epilepsy.—WHARTON SINKLER, M.D., has used this remedy in three cases, one of which is given in detail, and is the more valuable. A boy of ten years had epilepsy following a dogbite, which commenced as *petit mal*, and developed into nocturnal attacks of *grand mal*, occurring about every two hours. Bromide of potassium relieved him somewhat for a time, and oxide of zinc, being given instead, had no curative effect. One-sixth of a grain of extract of Cannabis Indica, three times daily, lessened the attacks to daily intervals, for a week, when they entirely ceased, and, at the date of the report, three months had passed without a return of the trouble.—*Med. Times*, Sept. 28th.

Combination of Cinchona Alkaloids with Morphia.—P. G. SKILLERN says that by a combination of cinchona alkaloids with opium a much better effect is obtained in the treatment of intermittent fever: the effect is more decided; half the amount of quinia or cinchonia is required; prevents disagreeable cerebral symptoms; enables the stomach more readily to retain quinia, and larger and more continuous doses of these preparations may be used without causing cinchonism. About ten grains of quinia with a third of a grain of morphia is the average dose mentioned.—*Med. Times.*

Chloroform as an Anæsthetic.—M. F. COMES gives practical suggestions regarding the employment of chloroform as an anæsthetic, and calls especial attention to its effects on different nationalities. The Irish, he says, will take more chloroform and are longer in yielding to its effects than any of the others specified. Americans yield to its influence with more ease and require less than Irish. Germans yield to chloroform with but little trouble, and are frequently anæsthetized without a struggle. Negroes are more easily influenced than either of the foregoing.—*Am. Med. Bi-weekly.*

Nitrite of Amyl as a Nervous Sedative.—DR. LYMAN refers to the efficacy of nitrite of amyl in a case of the opium habit, where, after two or three nights of complete wakefulness, consequent on breaking off the habit, a nervous irritation had ensued most distressing to the patient and the friends. He had caused the patient to inhale the nitrite directly from the vial; two or three whiffs had been sufficient to bring on the therapeutical effects, which were followed by refreshing sleep. The flushing of the face had been the criterion for ceasing the use of the drug in this case.—*Boston Med. and Surg. Jour.*

Curare as a Remedy for Epilepsy.—"In the opinion of Kunze," says the *Medical Press and Circular*, "we possess in curare a remedy by means of which we may cure cases of epilepsy of long standing. He employs a solution of seven grains of the drug in seventy-five minims of water, to which he adds two drops of hydrochloric acid. At intervals of about one week he injects hypodermically eight drops of the solution and in cases in which convulsions had occurred for several years, he obtained a complete cure after eight or ten injections.

Paracotoin as a Remedy in Epidemic Cholera.—PROF. BAELZ, of Tokio, Japan, contributes to the *Centralblatt* of July 6th an account of his striking success with this remedy in cases of malignant cholera. He administered it in doses of 0.2 gramme by hypodermic injection, suspended in equal parts of glycerin and water. The cure was prompt in five cases, all in which he used it, and the Japanese government has taken measures to provide a supply of the drug, in the event of another outbreak.

Therapeutics in the Vienna School.—A correspondent of the *Chicago Medical Journal and Examiner* writing from Vienna says that, after listening for some time to the lectures of Prof. Bamberger and hearing but little said of therapeutical measures, he asked a German physician why Prof. Bamberger did not tell something about treatment. The reply was that physical diagnosis was his only forte; that if he encountered a case in the diagnosis of which there was doubt, his great fear was that the patient, before his death, might pass from under his observation, and that he might be unable to clear up the mystery by a post-mortem examination.

Prof. Duchek, he says, although perhaps not so widely known as Prof. Bamberger, is far the better clinical teacher, and it is from him that one gets most of the practical hints in therapeutics that are to be obtained there. In the general résumé that Prof. Duchek gave at the end of the winter semester of his plan of treatment, he began by laying down the following maxim: "Give no medicines that will materially disturb the functions of life in your patient." He said further that in the early years of his practice, he had used a wide range of remedies, and was ever ready to make trial of all the new and much-vaunted preparations that were brought forward, but having been almost invariably disappointed in their use, he had now settled down to the employment of about one dozen remedies, seldom giving any others. Of these, the principal are quinia, digitalis, iodide and bromide of potassium, opiates, the salicylates, the acetate of ammonia, the mineral acids, ipecac, castor oil, the saline cathartics, and *occasionally* calomel. He never uses either aconite or veratrum. He believes that the influence that these last remedies exert in lessening the muscular force of the heart, as well as the blood-pressure in the arteries and veins, is, in the vast majority of cases of febrile and inflammatory disease in which they are prescribed, absolutely *injurious.*

Obituary.—Mr. Wm. S. Folger, a well-known druggist of Boston, Mass., died at Ocean Spray, on September 8th, aged 42 years. For several years he held the office of Vice-President of the Massachusetts College of Pharmacy.

BIBLIOGRAPHY.

THE ANTAGONISM OF THERAPEUTIC AGENTS, AND WHAT IT TEACHES. The Essay to which was awarded the Fothergillian Gold Medal of the Medical Society of London for 1878. By J. MILNER FOTHERGILL, M.D. Philadelphia: Henry C. Lea, 1878. 8vo, pp. 160.

THE information upon which this essay is based is among the more recent acquisitions of the science of medicine, and this is one of the earliest attempts to put it into such connected shape that the general scope of the subject, as it is at present understood, can be appreciated. That there is so little to be said must be the regret of every reader when he considers the value of that which is already determined, and the advantage of having so excellent a writer as Dr. Fothergill to act as its expounder. Nearly every page is full of suggestions which bear upon daily practice, but owing to the almost complete absence of an index, it is with difficulty that they can be found without careful re-reading.

Seven chapters are given to cover the following topics: I.—Experimental Inquiry: an historical chapter, commencing with the use of belladonna to relieve thirst by Italian peasants, so far back as 1570, and the resort to opium as an antidote, and coming to the experiments of Preyer, of Jena, with the antagonism of atropia and prussic acid; the antagonism of calabar bean and belladonna, of chloral and strychnia, etc. II.—The Action of Drugs chiefly as ascertained by experiment; embracing calabar bean, chloral hydrate, morphia, belladonna, and strychnia. III.—The Effects of Drugs upon the Rhythmical Discharging Centres. IV.—The Action of Drugs upon the Circulation: *e. g.*, Digitalis, Belladonna, Aconite. V.—The Action of Drugs upon the Respiration. VI.—Practical Use of the Antagonism of Drugs in Actual Poisoning. VII.—The Antagonism of Drugs in Ordinary Practice.

ELEMENTARY QUANTITATIVE ANALYSIS. By ALEXANDER CLASSEN, Professor in the Royal Polytechnic School, Aix-la-Chapelle. Translated, with Additions, by Edgar F. Smith, A.M., Ph.D., Assistant in Analytical Chemistry in the Towne Scientific School, University of Pennsylvania. 36 illustr., 8vo. Philadelphia, 1878. Henry C. Lea.

CLASSEN'S elementary work on analysis has found so much favor with teachers of chemistry in Europe that it forms the text-book for instruction in most of the German universities and polytechnic schools of Germany, Russia, Poland, and even France. The author abandons the systematic didactic method followed by others, and at once plunges into *medias res*, by giving minute directions for practically conducting the analysis of certain simple bodies, following this up by methods of separation and explaining them on practical examples. The assay of alloys is then taken up and afterwards a large number of mineral substances, selected from those which most frequently come under the hands of the analyst, in each of which cases the process is minutely detailed. The index furnishes at the same time a sort of key for the method of separation. Having long been acquainted with the work in its original German, we can only congratulate the author in having found so good a translator and editor, as well as publisher.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by DR. H. VON ZIEMSSEN. Vol. VIII., Diseases of the Chylopoëitic System, with Chapters relating to Diseases of the Bladder and Urethra, and the Functional Affections of the Male Genital Organs. American Edition, Edited by ALBERT H. BUCK, M.D. New York: William Wood & Co., 1878, 8vo, pp. 935.

THIS volume contains the following chapters: By Prof. F. A. Zurker, of Erlangen, and Prof. von Ziemssen, of Munich, *Diseases of the Œsophagus* (translated by Drs. Geo. G. Wheelock and David Magie, of New York); by Dr. J. Bauer, of Munich, *Diseases of the Peritoneum*, (translated by Reuben J. Harvey, M.D., of Dublin); by Prof. F. Mosler, of Greifswald, *Diseases of the Spleen* (translated by Robert T. Edes, M.D., of Boston); by Prof. N. Friedrich, of Heidelberg, *Diseases of the Pancreas* (translated by Mr. Robert W. Parker, of London); by Dr. G. Merkel, of Nürnberg, *Diseases of the Suprarenal Capsules* (translated by Reuben T. Harvey, M.D., of Dublin); by Prof. H. Lebert, of Vevay, *Diseases of the Bladder*, and Diseases of the Urethra (translated by Warren Tay, M.D., of London) and by Dr. H. Curschmann, of Berlin on *Functional Diseases of the Male Genital Organs* (translated by J. R. Gasquet, M.D., of England).

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE: for the Use of Physicians and Students. By JAMES TYSON, M.D., ETC. Second Edition. Revised and Improved, with Illustrations. Philadelphia: Lindsay & Blakiston, 1878, 8vo, pp. 172, $1.25.

IN issuing a second edition, Professor Tyson has made considerable additions, including much in the way of recent observations. This has been accomplished by enlarging the page. Owing to his familiarity with the subject, both as a teacher and through an extensive experience in urinary examinations, the author is particularly fitted for making a practical treatise. The physiology of urinary secretion is briefly alluded to. A description of the materials required in its examination is given, as well as practical hints regarding the selection of a specimen for examination. Then follow, in order, its physical and chemical character; the mode of studying its different constituents both in health and disease; a chapter on differential diagnosis of renal diseases; another on urinary calculi, and, lastly, forms of blanks for recording cases and convenient tables for reference. The text, of itself clear, is rendered additionally comprehensible by a liberal use of illustrations.

MEDICINAL PLANTS, Being Descriptions with Original Figures of the Principal Plants Employed in Medicine, and an account of their Properties and Uses. By ROBERT BENTLEY, F.L.S., and HENRY TRIMEN, M.B., F.L.S. Philadelphia: Lindsay & Blakiston, 1878. $2.00 per part.

THE publication of this very valuable and interesting work continues without interruption, and furnishes not only illustrations of many new drugs, but embraces in the text much that has recently become known concerning drugs which have been in use for many years. The parts recently received are composed as follows:

PART 29.—68, *Pistachia Lentiscus* or the Mastic-Tree; native of the Mediterranean region and the source of the gum mastic of Scio; 69, *Pistachia Terebinthus*, the source of Chia or Cyprus Turpentine; 76, *Lens esculenta* or the Lentil; 126, *Ferula Narthex* or Thibetan Asafœtida; 148, *Erigeron heterophyllum* or Fleabane; 169, *Styrax Benzoin* or Benzoin, and 177, *Tylophora Asthmatica* or Indian Ipecac—a Bengalese drug officinal in the Pharmacopœia of India.

PART 30.—33, *Garcinia Hanburii* or Siam Gamboge; 41, *Guaiacum Officinale* or Lignum Vitæ of the West Indies; 72, *Indigofera tinctoria*, the Indigo-plant of Africa and India; 88, *Cassia Marilandica*, the wild senna of this country; 220, *Sassafras officinale*, sufficiently familiar to our readers; 222, *Cinnamomum Camphora* or Camphor Laurel; 254, *Juniperus Sabina* or Savin, and 268, *Amomum Melegueta*—a very ornamental plant from which Grains of Paradise are derived.

PART 31.—32, *Garcinia Indica*: the Mangosteen described on page 286 of NEW REM. for 18[illegible]6. Kokum Butter, one of its products, has been used for the same purpose as coco-butter; 52, *Citrus Bergamia* (see page 292); 79, *Butea frondosa*, an Indian plant having handsome flowers and one of the sources of Kino; 120, *Carum Ajowan* (see NEW REMEDIES); 259, *Pinus Tæda* or Frankincense Pine found in our Southern States; 263, *Pinus balsamea*, the Balm of Gilead or Silver Fir of the

U. S., and, lastly, 271, *Alpinia officinarum* or lesser Galangal (not previously figured), a Chinese drug not official in the U. S. P., Ph. Br., or Ph. I., and used for purposes to which ginger is ordinarily put.

THE PHYSICIAN'S VISITING LIST FOR 1879. Twenty-eighth year of its publication. Philadelphia, Lindsay & Blakiston.

THIS visiting list is almost too well known to require notice beyond the statement that it is now published for the coming year. Three pages only are used for the memoranda which every physician will find convenient more or less often during the year or in cases of emergency, and the balance is divided into customary blank forms for the visiting list and the memoranda of wants, engagements, births, deaths, etc. Good judgment has been shown in keeping the work within a limit as regards size which will prevent it becoming a clumsy thing to carry in the pocket.

THE SCIENCE OF THERAPEUTICS IN OUTLINE. A Systematic Arrangement of Principles concerned in the Care of Human Health, Showing their several Departments. By J. P. DAKE, A.M., M.D. 8vo, pp. 46.

THE author divides his subject into: 1, Physiological or General Therapeutics and 2, Pathognomic or General Therapeutics. Under the former general heading, he arranges Hygienic, Chemical, Mechanical, and Antiparasitic measures, and under the 2d, Antipathic, Allopathic, Isopathic, and Homœopathic principles. In his summary he very rationally concludes that "a proper understanding of the great therapeutic field . . . will show the absurdity of the many insufficient and transient theories now generally followed by medical men in special therapeutics, allowing the exhibition of remedies from a materia medica most unreliable, in doses toxical or totally inert, each embracing several conflicting forces or no force whatever."

THE TREATMENT OF STRUMOUS DISEASE. By HORATIO STORER, M.D., Cambridge. Reprinted from the *Boston Med. and Surg. Jour.* 8vo, pp. 10.

THE essential features of this paper were given by us in a recent number of NEW REMEDIES.

TRANSACTIONS OF THE TWENTY-FOURTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. Wilmington, N. C., 1878. 8vo, pp. 107.

DR. W. W. LANE reported the successful use of Goa powder in chronic psoriasis. Besides the addresses of the President, the most important papers of the volume are on Diphtheria by Charles Duffy, Jr., of Newbern, and J. K. Hall, of Greensborough.

ON THE USE OF THE SOLID RUBBER BANDAGE IN THE TREATMENT OF ECZEMA AND ULCERS OF THE LEG. By L. DUNCAN BULKLEY, M.D. Reprinted from the *Archives of Dermatology*, New York. 8vo, pp. 21.

THIS mode of treatment, first brought to the notice of the medical profession in 1877, at the meeting of the Am. Med. Assoc. by Dr. H. A. Martin, of Boston, has proved to be remarkably efficacious, and we recommend a perusal of Dr. Bulkley's paper to those who have occasion to treat this obstinate class of cases.

ON DIET AND HYGIENE IN DISEASES OF THE SKIN. By L. DUNCAN BULKLEY, M.D., New York. Reprinted from the *Virginia Med. Monthly.* 8vo, pp. 18.

DR. BULKLEY leans to the views of Wilson on the nature of skin affections as compared with the tenets of Hebra, and considers that very much may be accomplished in their prevention and management by hygienic measures, or those affecting the condition of general health.

W. H. SCHIEFFELIN & Co.'s GENERAL PRICES CURRENT of Foreign and Domestic Drugs, Medicines, Chemicals, Extracts, Pharmaceutical Preparations, Essential Oils, Sponges, Fancy Goods, Druggists' Sundries, Perfumery, Proprietary Articles, etc. September, 1878. 8vo, pp. 355.

THE newly-revised prices current of this very well-known house has just come to hand. It shows evidences of careful preparation, and is very comprehensive; including not only the specialties of the establishment and a very complete list of drugs, both officinal and commercial, but likewise a large proportion of the proprietary articles, paints, toilet articles, etc., in general demand. It is also very largely illustrated.

BERBERIDACEÆ. The Botanical Description, Commercial History, Medical Properties, and Pharmaceutical Preparations. By C. G. and J. U. LLOYD, Cincinnati. 8vo, pp. 16.

THIS paper is quite opportune, since renewed attention is just now being directed in this country to the medicinal properties of the plants of this species. Those who are interested in the subject will find it worth their trouble to obtain the Lloyds' pamphlet, since it is clear and comprehensive in its statements.

MATTHEWS' ILLUSTRATED CATALOGUE AND PRICE-LIST of Apparatus, Materials, and Accessories for Making, Bottling, and Dispensing Carbonated Beverages, including "Soda" Water, Mineral Waters, and Sparkling Liquors. Small 8vo, pp. 128.

THE illustrated catalogues published by John Matthews of this city are among the most elegant and comprehensive works of their kind. The artistic and literary taste which they exhibit are quite exceptional and correspond to the excellence and beauty of the different styles of apparatus, for which the house is so justly famous.

THE THROAT AND ITS DISEASES, with One Hundred Typical Illustrations in Color, and Fifty Wood Engravings, Designed and Executed by the Author, LENOX BROWNE, F.R.C.S. Ed., etc. London: Bailliere, Tindall & Cox, 1878, 8vo. (large), pp. 316.

THIS sumptuous work emanates from one of the best known writers on throat affections, and is intended as a practical guide for the general practitioner rather than as an exhaustive treatise adapted for those who purpose making this class of diseases a specialty.

While it can hardly be considered equal in all respects to some of the treatises which have appeared in the United States, where this branch of surgery has had the benefit of the mechanical skill and readiness with therapeutical measures which characterize so many American surgeons, it is none the less well entitled to the favorable reception which it has already met with, both here and in Great Britain.

Although the author has provided an abundance of illustrations which will aid those who are comparatively unfamiliar with the appearances presented in laryngeal diseases, the aid which is furnished in the text is by no means to be reckoned as secondary in importance, since in both comprehensiveness, arrangement, and style it is all that could be desired. In the matter of treatment alone do we find, what seems to us, an occasion for criticism, and that is mainly on account of the author's pronounced objection to atomization of fluids as a mode of making local application of remedies to the air-passages. This is possibly due to the fact that the appliances for doing so are not generally so good in England as they are here, and that the author's experience with them has not been so successful as has been that of American laryngologists. With this exception, the work will stand on its own merits.

PHARMACEUTISCHE CHEMIE von F. A. FLUECKIGER. Erster Theil. Berlin: Gaertner. $3.70 (gold).

WE have just received a copy of Professor Flückiger's new work on Pharmaceutical Chemistry, and will at present simply draw the attention of our readers to it, as it will be found to be fully up to the requirements of pharmacists and chemists, as well as to the reputation of the author.

Hygrometric Handkerchiefs.—In France, handkerchiefs printed with chloride of cobalt are sold under the name of "Foulards Barometre." The design represents a man with an umbrella. In fine weather the umbrella is blue; in changeable, gray; and in rainy weather, white. The first washing removes the chloride of cobalt, and the handkerchief loses its barometric properties.

THE VOLUMETRIC ESTIMATION OF ACIDS.

BY HENRY B. PARSONS.

In estimating the strength of acids by the volumetric method, it is necessary to have an alkaline solution of known strength. A decinormal* solution of sodic hydrate ("Soda," U. S. P., NaOH) is best, and may be made as follows: Weigh out rather more than 4 grammes of good caustic soda, and dissolve in water, to make one litre of solution. Into five beakers run 20 cubic centimetres each of decinormal oxalic acid, made as described in October NEW REMEDIES. Rinse the burette with water, and with the unstandardized soda solution, to free it from all acid. To each beaker containing acid add 10 drops of cochineal solution, and then carefully run in the soda solution, until each liquid shows an alkaline reaction. Keep notes of the number of cubic centimetres required. Suppose the respective volumes of alkali were 17.5, 17.4, 17.4, 17.5, and 17.6 cubic centimetres; then 87.4 cubic centimetres of alkali will neutralize 100 cubic centimetres of decinormal acid. It is, therefore, too strong, as we wish 100 cubic centimetres of alkali to equal 100 cubic centimetres of acid. It is only necessary to add water to the soda solution, so as to make every 87.4 cc. up to 100 cc. Into the litre jar pour 870 cc. of the alkali, and from the burette run in 4 cc. more, then add water to fill up to 1,000 cc. The solution thus made should not be used in analyses until it has been tested by repeated titrations with decinormal acid. It should be kept in a glass-stoppered bottle, and be plainly marked.

The general rule for est mating the percentage of real acid is the same as that given last month for ascertaining the per cent of alkali in given samples, viz.: weigh out the amount of acid theoretically equivalent to 100 cc. of decinormal soda solution; the number of cubic centimetres of soda solution required to neutralize will show the percentage of real acid in the sample. It must be remembered that it is not possible to make all acids contain one hundred per cent of real acid; hence the acid examined must be condemned as weak only when it falls below the standard prescribed by the U. S. P. By reference to the Dispensatory, Attfield's Chemistry, and Parrish's Pharmacy, statements may be found of the percentage strength of pharmacopœial acids.

In case an excess of soda has accidentally been added in titration, this excess may be determined by decinormal oxalic acid; the difference will be the number of cubic centimetres required to neutralize the original acid. By this method of titration very accurate results may be obtained.

If the volumetric results show an acid to be much below the pharmacopœial standard, it should be examined as to the nature of the impurities present. Water is, in most cases, the adulterant. Mineral matters are frequently present; soda and potash are often found in cheap acids, as are also iron, lead, arsenic, etc. If water is the only adulterant, the acid need not be rejected; but in all prescriptions and preparations a proportionally larger amount should be used, so as to furnish the amount of absolute acid required. If mineral matters are found in the acid, it should never be used in filling prescriptions, or in making preparations for medicinal uses. It may still be valuable for making coarse chemicals, generating carbonic acid in the soda apparatus, cleaning bottles, etc.

It will be seen that it is a comparatively easy matter to quickly determine the percentage strength of any pharmacopœial acid or alkali. If every pharmacist would do this, the quality of his medicines would be greatly improved, by the substitution of purer chemicals for some of those now dispensed.

* ["*Normal* solutions, as a general rule, are prepared so that one litre at 16° C. shall contain the hydrogen equivalent of the active reagent, weighed in grammes. *Decinormal* solutions are made one-tenth, and *centinormal* one-hundredth, of this strength, and may be shortly designated as $\frac{N}{10}$ and $\frac{N}{100}$ solutions."—SUTTON, 3d ed., p. 21.]

For the convenience of the student, the following summary is given. In the third column is given the weight of each acid in grammes, which is theoretically equivalent to 100 cc. decinormal alkali, and is the amount which should be weighed out for titration. The fourth column shows the number of cubic centimetres of decinormal alkali necessary to neutralize each acid, and represents also the percentage of absolute acid required by the U. S. P.:

NAME.	SYMBOL.	WT. IN GRAMMES.	ALKALI IN CC.
Acetum	$HC_2H_3O_2$	.600	4 to 5
" Destillatum	$HC_2H_3O_2$	.600	4 to 5
Ac. Aceticum	$HC_2H_3O_2$	.600	36
" " Dil.	$HC_2H_3O_2$	.600	4 to 5
" Citricum	$H_3C_6H_5O_7.H_2O$	.700	100
" Muriaticum	HCl	.365	32
" " Dil.	HCl	.365	8
" Nitricum	HNO_3	.630	70
" " Dil.	HNO_3	.630	10
" Oxalicum	$H_2C_2O_4.2H_2O$	.630	100
" Phosphoricum Glac.	HPO_3	.800	100
" " Dil.	H_3PO_4	.490	10
" Sulphuricum	H_2SO_4	.490	100
" " Dil.	H_2SO_4	.490	12
" Tartaricum	$H_2C_4H_4O_6$	.750	100

PHILADELPHIA CORRESPONDENCE.

WITH the advent of October the various educational interests in our city commence their fall and winter sessions.

The introductory to the lectures in Jefferson Medical College was delivered to a large audience, by Prof. J. M. Da Costa, M.D., on the evening of October 1st.

The University of Pennsylvania has added to its institution a Dental School, which was opened with appropriate services, and the address of Dr. S. Weir Mitchell was listened to with marked attention.

The Pennsylvania College of Dental Surgery has occupied its new building at the corner of Twelfth and Filbert Streets, and has a promise of a good class.

The Philadelphia Dental College, located on Tenth Street above Arch Street, has adopted a graded course of instruction, and a large class show their appreciation of this advanced step.

The general introductory to the fifty-eighth session of the Philadelphia College of Pharmacy was delivered on Wednesday evening, October 2d, by Prof. Robert Bridges, M.D. The college hall was densely crowded, and the venerable professor was listened to with marked attention. Professor Bridges was elected to the Chair of Chemistry in this college in 1842, and has continued without interruption for thirty-six years. The present session inaugurates the graded course of instruction, and the class numbers 164 junior students and 163 senior students, making a total of 327 (representing 22 States and 5 foreign nations). At the close of the introductory address, Prof. Bridges introduced his assistant, Prof. Sadtler, who will lecture to the junior class. Prof. Sadtler has the reputation of being a thoroughly educated chemist, and received his degree at Heidelberg. The junior class will be well instructed in chemical physics, the college having expended a large sum of money in the purchase of the most approved apparatus. Professors Maisch and Remington are both indefatigable in their separate branches. The valuable collection of manikins of plants imported by Prof. Maisch will furnish the latter with material assistance in demonstrating the growth and development of the vegetable kingdom.

The laboratory classes are very large, Prof. Remington's class in practical pharmacy being especially full. The museum of the college has received valuable additions from Japan and Bombay; the packages have not, however, yet been opened, in consequence of the handsome walnut cases recently built not being quite ready for their reception. In my next letter I shall endeavor to give some account of the drugs received.

The collection of American drugs sent by the Philadelphia College of Pharmacy to the Paris Exposition embraced over 200 varieties. Each specimen was inclosed in a neat tin case with glass lid, and labeled with the botanical and English names, and has been awarded a silver medal. This entire exhibit has been presented to the Société et Ecole de Pharmacie of Paris.*

PHILADELPHIA, October 23d, 1878.

PRESCRIPTIONS AND FORMULÆ.

Antiseptic Balsam (Dr. J. Felix's "Cicatrizing and Antiseptic Balsam")—

Acid. Carbol. pur., liquefact.	partes 4
Morphiæ hydrochlorat	" 1
Tinct. arnicæ	" 10
" aconiti	" 10
Balsami Peruviani	" 25
Glycerinæ	" 50

Mix. Said to be an excellent application to malignant ulcers.

Creasote-Wine.—

Beechwood-tar creasote	192 grains.
Tincture of gentian	1 fl. ℥
Alcohol, 85 per cent	8 fl. ℥
Malaga wine, to make	1 quart.

Vauquelin's Anti-asthmatic Cigarettes.—

Sodium arseniate	3 grains.
Extract of belladonna	8 "
Extract of stramonium	8 "

Dissolve the arseniate of sodium in a small quantity of water, rub it with the two extracts; then soak up the whole mixture with fine blotting paper, which is dried, and cut into 24 equal parts. Each part is then rolled up in a piece of cigarette-paper.

4 or 5 inhalations from one cigarette are generally sufficient as a dose.

Artificial Mineral Waters.

(Continued from page 315.)

32. *Sodium Iodide, dry.*

Crystallized and powdered sodium iodide, dried on a waterbath until it ceases to lose weight.

33. *Sodium Nitrate, dry.*

Crystallized and powdered sodium nitrate, dried on a waterbath until it ceases to lose weight.

34. *Sodium Phospate, Solution.*

Sodium phosphate, offic	61 parts
Sodium carbonate, dry	9 "
Dissolve at a gentle heat in boiling distilled water	210 "
Or sufficient up to make the weight to	280 "

Spec. gr. at 30° C.; 1.114–1.117. It should be filtered while warm.

Contains 10 per cent of dry basic sodium phosphate.

N.B.—This solution deposits crystals already when cooled to 15°C.; it should therefore be brought to a temperature of 30 to 40° C. before using it.

35. *Sodium Silicate, Solution.*

Sodium carbonate, dry	40 parts.
Pure silica in fine powder	23 "

Mix intimately, press the mixture into a crucible, cover the latter, and expose it to a strong heat, until the mixture is melted, when it should be poured into an iron mortar, and, after cooling, be powdered. Keep in well-closed bottles. Take of this

Sodium silicate	1 part.
Distilled water	5 parts.

Digest in a flask for one day, frequently shaking, then add

Distilled water	4 parts.

or sufficient to obtain altogether 10 parts. The solution must be preserved in a cork-stoppered vial, well closed.

Spec. gr. 1.105–1.107.

36. *Sodium Sulphate, Solution.*

Sodium sulphate, perfectly dry	1 part.
Distilled water	9 "

Dissolve, filter, and preserve it at a medium temperature.

Contains 10 per cent of dry sodium sulphate. Spec. gr. 1.092–1.093.

37. *Strontium Chloride, Solution.*

Strontium chloride, cryst	20 parts.
Distilled water	98 "
Or sufficient to obtain altogether	100 "

Dissolve and filter.

Spec. gr., 1.093–1.094.

Contains 10 per cent of dry strontium chloride.

II. FORMULÆ FOR ARTIFICIAL MINERAL WATERS.

In the following formulæ the ingredients should be mixed in the order in which they are placed in groups. Each group is separated from the other by a line. For instance, in the first water mentioned (that of Bilin), the first 6 ingredients having been mixed, add to them the next two ingredients previously mixed together, then add the calcium sulphate, then the iron sulphate, and so in every case.

1. *Bilin. Joseph's Quelle.*

	To make 480 troy ounces.	
Potassium carbonate sol.	234	grains.
Sodium sulphate "	198.6	"
" carbonate "	8030	"
" chloride "	829	"
Lithium chloride "	38	"
Sodium phosphate "	26	"
" silicate "	148	"
Magnesium sulphate "	471	"
Alumin. and sod. sulphate	38.7	"
Calcium sulphate, cryst	159.4	"
Iron (proto-) sulph. gran. sol.	5.75	"
Distilled water	220,170	"
Carbonic acid	3.5	volumes

2. *Eger. Franzensbrunnen.*

	To make 480 troy ounces.	
Sodium sulphate sol.	7256.4	grains.
" chloride "	1828	"
" carbonate "	2215	"
" phosphate "	12	"
" silicate "	289	"
Magnesium chloride "	228	"
Calcium chloride "	604	"
Strontium chloride "	1	"
Alum. and sod. sulph. sol.	7	"
Manganese carbonate	1.3	"
Lithium carbonate	1.11	"
Iron (proto-) sulph. gran.	17	"
Distilled water	217,911	"
Carbonic acid	4	volumes

Some are in the habit of adding besides:

Sodium bromide sol.	2.4	grains.
" iodide	0.004	"
Ammonium carb. sol.	5.6	"

* [The reports received from Paris would lead us to infer that the above-mentioned exhibit of drugs was among the most creditable and best appreciated contributions made from this country to the Exhibition, in the class to which it belongs.—ED. N. R.]

3. *Eger. Salzquelle.*

To make 480 troy ounces.

Sodium sulphate	sol.	6017	grains.
" chloride	"	2116	"
" carbonate	"	2087	"
" phosphate	"	8.6	"
" silicate	"	299	"
Lithium chloride	"	9.3	"
Magnesium sulphate	"	342.6	"
Calcium chloride	"	476 3	"
Alum. and sod. sulphate	sol.	7.2	"
Manganese carbonate		0.36	"
Iron (proto-) sulphate	gran.	5	"
Distilled water		219,032	"
Carbonic acid		4	volumes.

4. *Ems. Kesselbrunnen.*

To make 10,000 grammes.

Sodium chloride	sol.	64.62	grams.
" sulphate	"	0.08	"
" carbonate	"	174.4	"
" phosphate	"	0.16	"
" silicate	"	9.65	"
Potassium carbonate	"	0.31	"
" sulphate, dry		0.472	"
Calcium chloride	sol.	18.2	"
Magnesium chloride	"	13.95	"
Barium chloride	"	0.024	"
Strontium chloride	"	0.022	"
Aluminium chloride	"	0.13	"
Manganese carbonate		0.004	"
Iron (proto-) sulphate	gran.	0.062	"
Distilled water		9718	"
Carbonic acid		3.5	volumes

5. *Ems. Kränchen.*

To make 10,000 grammes.

Sodium sulphate	sol.	1.51	grams.
" carbonate	"	160.767	"
" phosphate	"	0.053	"
" silicate	"	10	"
" chloride	"	74	"
Potassium sulphate, dry		0.428	"
Calcium chloride,	sol.	17.3	"
Magnesium chloride	"	14.6	"
Barium chloride	"	0.006	"
Strontium chloride	"	0.0056	"
Alum. and sod. sulphate	sol.	0.08	"
Manganese carbonate		0.007	"
Iron (proto-) sulph.	gran.	0.0383	"
Distilled water		9721	"
Carbonic acid		2.5	volumes.

6. *Fachingen.*

To make 480 troy ounces.

Sodium carbonate	sol.	6,130	grains.
" sulphate	"	11.5	"
" phosphate	"	15.3	"
" silicate	"	160	"
" chloride	"	13.6	"
Lithium carbonate, dry		0.018	"
" phosphate,	"	0.006	"
Calcium chloride	sol.	672.45	"
Magnesium chloride	sol.	524.4	"
Alum and sod. sulph.	"	0.24	"
Calcium fluoride, dry		0.08	"
Strontium carbonate, dry		0.024	"
Iron (proto-) sulph.,	gran.	5.75	"
Distilled water		222,867	"

7. *Friedrichshall (Bitterwasser.)*

To make 480 troy ounces.

Sodium sulphate	sol.	15,169	grains.
" chloride	"	15,456	"
" bromide,	"	294.3	"
" carbonate	"	1,534.5	"
Potassium sulphate, dry		45.7	"
Magnesium sulphate	sol.	.13571	grains.
Calcium chloride	"	2,569.5	"
Magnesium chloride	"	9.211	"
Distilled water		172,560	"
Carbonic acid		3.5–4	volumes.

8. *Geilnau.*

To make 480 troy ounces.

Potassium carbonate	sol.	32	grains.
Sodium sulphate	"	19.5	"
" phosphate	"	0.9	"
" carbonate	"	1,775	"
" chloride	"	83	"
Ammonium carbonate	"	2	"
Sodium silicate	"	116	"
Barium chloride	"	0.36	"
Calcium carbonate		78.45	"
Magnesium carbonate, cryst.		60.24	"
Iron (proto-) sulph.	gran.	6.45	"
Iron, reduced		1.77	"
Manganese carbonate		0.78	"
Distilled water		227,224	"
Carbonic acid		4	volumes.

9. *Heilbrunn. Adelheidsquelle.*

To make 480 troy ounces.

Sodium bromide	sol.	110.4	grains.
" chloride	"	11,010	"
" carbonate	"	2,171	"
" silicate	"	90	"
" iodide, dry		6.6	"
Potassium chloride	sol.	6	"
Calcium chloride	"	194	"
Magnesium chloride	sol.	49	"
Aluminium chloride	"	111	"
Iron (proto-) sulph.	gran.	2.82	"
Iron reduced		0.48	"
Distilled water		216,648	"
Carbonic acid		3.5	volumes.

10. *Kissingen. Pandur.*

To make 480 troy ounces.

Sodium phosphate	sol.	13	grains.
" silicate	"	19	"
" chloride	"	9,757	"
" bromide	"	16.2	"
" carbonate	"	2,626.5	"
Potassium chloride	"	556	"
Lithium chloride	"	38.7	"
Ammonium carbonate	"	24.57	"
Sodium nitrate	dry	0.8	"
Calcium chloride	sol.	3,180	"
Magnesium sulphate	"	1,925.4	"
" chloride	"	170.4	"
Iron (proto-) sulph.	gran.	14.58	"
Distilled water		212,058	"
Carbonic acid		4	volumes.

11. *Kissingen. Ragoczi.*

To make 480 troy ounces.

Sodium phosphate	sol.	13.5	grains.
" silicate	"	60.4	"
" chloride	"	10,411.5	"
" bromide	"	19.2	"
" carbonate	"	2,759.5	"
Potassium chloride	"	661	"
Lithium chloride	"	46	"
Ammonium carbonate	"	6	"
Sodium nitrate	dry	21.3	"
Calcium chloride	sol.	3,600	"
Magnesium sulphate	"	2,220	"
" chloride	"	56	"
Iron (proto-) sulph.	gran.	17 43	"
Distilled water		210,508	"
Carbonic acid		4	volumes.

(To be continued.)

NOVELTIES.

Kronthal Water.

THE water of the Kronthal Spring of Nassau, Germany, is lately coming into extensive use as a table beverage. It belongs to the class of mildly alkaline waters which contain, as the chief mineral ingredient, chloride of sodium. The carbonates of lime and magnesium are its principal alkaline constituents. Its taste is agreeable, and by many preferred to that of any other waters of its class, and the free carbonic acid which it contains is estimated at about 2.317 parts per thousand—sufficient to render it strongly effervescent. Besides its uses as a beverage (for which it appears to be very well adapted), the Kronthal water is recommended, on account of its alkalinity, in catarrhal affections of the mucous membranes, its free carbonic acid making it also somewhat stimulant and therefore serviceable in certain forms of indigestion. The sole agents for this country are L. SOMBORN & Co., of 12 Vesey Street, in this city.

"Johnson's Silk-Felt Insole."

THIS article is well calculated to be of great service to persons who are troubled with excessive perspiration of the feet, or who have a sluggish circulation, and whose feet are therefore kept warm with difficulty. It is composed of felted wool and raw silk, and is therefore an excellent non-conductor of heat, while its porous nature renders it absorbent and retards evaporation.

When insoles are not worn, the acid perspiration accumulates in the sole of a shoe or boot, and after a time, through decomposition of the organic matter, renders the latter excessively offensive, so that, however carefully the feet may be washed, or the stockings changed, it becomes necessary to discard the shoe or boot before it is at all worn. Besides this, perspiration, which is decidedly acid, causes leather to "rot" or become brittle very rapidly, and the life of the shoe is much shortened. By using a well-made insole like this one, and changing and airing it frequently, both these troubles would be avoided.

We are not aware of the nature of the medication which the manufacturer claims as a feature of the article, but we will here suggest that the use of a small amount of salicylic acid will retard the putrefactive changes in the organic matter of the perspiration. D. W. Johnson, of 323 Arch Street, Philadelphia, is the manufacturer.

Saccharated Chloro-Pepsine

is a preparation manufactured by Mr. Benj. W. Dyer, a well-known pharmacist in this city, for whom Frazer & Lee, of 20 Beekman Street, New York, are the general agents. Its formula, as given on the package, states that it consists of pepsine from swine, oxochloroxylate of cerium and calcium, and sugar of milk. The presence of the cerium salt must undoubtedly add greatly to the value of the remedy in cases where vomiting is a symptom, and adapts it for use in a large class of affections in which pepsin is likewise indicated. In our estimation, the preparation is well worthy of a careful trial.

"Carlton's" Toilet Preparations.

ON page 25 of this volume, we called attention to the ingenious mode in which "Carlton & Co.," of 148 Eighth Street, New York, were putting up camphor-ice for the retail trade, and we have now to note the fact that they have made considerable improvement in the quality of the "ice" itself, and have added the various colors of "cosmetic" to their stock of toilet preparations, putting them, likewise, into Petingale's glass tubes. This house also manufactures some choice varieties of colognes and toilet waters, which are pretty certain to give satisfaction, both by the delicacy and permanence of their odors.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

No. 444.—**Cement for Broken Porcelain and Delf** (B. & W., Ill.).

An excellent cement for mending porcelain, earthenware, etc., which is so tenacious that fractures generally recur only at unmended places, is made by mixing 10 parts each of freshly-slaked lime and borax, and 5 parts of litharge with water, applying the mixture to the fracture, and heating in an oven red-hot. Of course, it cannot be used if the article will not stand fire.

No. 445.—**Diamond-Cement** (Same).

Mix intimately 30 parts of litharge, 10 of quicklime (fallen to powder of its own accord; that is, only partially slaked), 20 of levigated chalk, 100 of graphite, and 40 of linseed oil. This is a superior cement for metals, and must be applied hot.

No. 446.—**Orange Ratafia** (M. B., R. I.).

Orange juice	1 quart.
Alcohol	4 quarts.
Water	3 "
Tincture of Curaçao	about 6 fl. oz.
Sugar	9 pounds.

The oranges are peeled, and carefully freed from the white portion of the peel; they are then pressed so as not to break the seeds; the juice is then immediately mixed with the alcohol, and left 8 days undisturbed. At the end of this time, the clear liquid is poured off the deposited sediment, containing vegetable albumen, etc., filtered if necessary, and mixed with the syrup, previously prepared from the sugar and water. Finally, the tincture is added; but care should be taken not to add too much, as an excess would make the product bitter. The tincture is prepared by macerating 3 parts (by weight) of Curaçao peel in 10 parts (by weight) of alcohol for 14 days, and filtering.

No. 447.—**Artificial Rum** (J. H. B. & Co., Ky.).

Whether the sample of rum you have sent us is "fit for use" or not, we cannot say, as we do not know the use you intend to put it to. If it is intended for being poured into the street-sewers, to destroy the rats, we think it will answer the purpose quite well. It is certainly not fit for being swallowed by a human palate, and has, no doubt, been compounded after some of the "original" formulæ to be found in some of the "receipt-books." We have neither the time nor the inclination to verify our supposition, but we will quote you at least two of these formulæ, to show you how *improper*, or even *dangerous* such compounds are:

I.	Acetic ether	220 grammes.
	Nitrous ether	70 "
	Oil of birch-tar	10 "
	Lamp-black (!)	200 "
	Nut-galls, powd.	1,000 "
	Caramel	1,000–1,500 "
	Alcohol of 95 per cent.	100 quarts.

To be allowed to stand for about 3 months, then filled clear into flasks.

II.	Sulphuric acid	1,500 grammes.
	Manganese dioxide	500 "
	Catechu	20 "
	Alcohol	1 quart.
	Molasses	1 "

To be allowed to stand in a warm place for several months. Then add 100 quarts alcohol, and distil until 10 quarts are left in retort. (From *Gaber, Aug.*, Die Liqueur-Fabrikation, 8vo, Wien, 1875, page 356, etc.)

No. 448.—**Pipsissewa-Beer** (J. B. W., Mass.).

The following is the process of Dr. J. Parrish: Pipsissewa (*Chimaphila umbellata*), ½ lb.; water, 1 gall. Boil, strain, and add: sugar, 1 lb.; powdered ginger, ¼ oz.; yeast, q. s. Keep it in a moderately warm place, to excite a brisk fermentation; the next day decant the liquor, and strain it through flannel; allow it to work for another day or two, according to the weather; then skim it, again decant or strain, and put it into bottles, the corks of which should be tied down with wires. This preparation has been recommended by some in scrofulous affections of the joints, in doses of half a tumblerful.

No. 449.—**Wittstein's "Organic Constituents of Plants," etc.** (Subscriber).

The English translation of Wittstein's well-known work, made by Baron Ferd. v. Müller, and mentioned on page 243 of our August number, has not yet reached this country. Copies of it have been ordered from Melbourne, Australia, and their arrival will be duly announced.

No. 450.—**To gild Glass** (J., Toronto, Ont.).

This correspondent says that he has been advised to use a method based upon the alleged reduction of alkaline gold solutions by hydro-alcoholic solution of marsh-gas, but that he found the method to fail completely. We would advise him to try the following, and we would be glad to hear that the results have been satisfactory.

Make a solution of neutral chloride of gold, containing 155 grains of gold in 40 fl. oz. of water. Prepare a solution of caustic soda of the spec. gr. 1.060. Mix 4 volumes of the gold solution with 1 volume of the soda solution, and then immediately add 1⅛ volume of the reducing liquid, which is prepared by dissolving 31 grains of grape-sugar (glucose) in 370 grs. of distilled water, and adding 395 minims of 80 per cent alcohol and the same amount of aldehyde, sp. gr. 0.870. If the latter cannot be bought, the reducing liquid may be made as follows:

Introduce 617 grs. of alcohol, and 539 grains of manganese peroxide into a retort, add slowly 772 grs. of strong sulphuric acid, and distil into a receiver containing 770 grains of distilled water, until the bulk of the latter has been doubled (by the aldehyde which has passed over). Add to the distillate 154 grains of glucose and 3 fl. oz. and 185 min. of 80 per cent alcohol, and dilute the whole to 16⅞ fl. oz.

The object to be gilded, if flat, may be placed on top of the solution, with the surface to be coated downward. The latter must be chemically clean, by careful washing with soda-solution, and pure alcohol, not with acids. It is of advantage to have the bath at a temperature of about 110–120° F. This process is known as Wernicke's and is occasionally used here by artists, one of whom has told us, that by using great care, and absolute cleanliness, the process succeeds quite well. Of course, the gilded surface should be afterwards varnished.

We also learn that another method is sometimes used, namely to silver the glass by Draper's method (ammonio-nitrate of silver, Rochelle salt, and silver nitrate), and to pour over the silvered surface a dilute solution of chloride of gold, whereby the silver becomes chloride, and gold is deposited. The chloride of silver is then dissolved off with sodium hyposulphite, and the gold mirror washed, dried, and burnished.

No. 451.—**Opium Cultivation in the U. S.** (Camden, S. C.).

Various attempts have been made to cultivate the poppy for the production of opium in this country; but they have all failed, chiefly on account of the inability of the growers to obtain enough hands at low wages. There is but little likelihood that any future attempts will be successful, at least for many years to come, as the opium-districts of Asia-Minor, Persia, Africa, India, and China are fully able to supply the markets of the world. You will find various articles in this journal, vol. 5, 6 and 7, which give you information on the extent of its cultivation abroad. See also: *Proc. of the Am. Pharm. Assoc.* 13, 51; 17, 176; 21, 240; 22, 627; 23, 198–200 (North Carolina Opium, etc.); 24, 531 and the last (14th) edition of the U. S. Dispensatory, page 654.

No. 452.—**Anti-Fat** (Worcester, Mass.).

We are told that the base of this secret remedy is *Fucus vesiculosus*, which has been particularly recommended for the lessening of obesity. A full account of this was published on page 322 of our volume for 1877. The balance of the query is still under consideration.

No. 453.—**Administration of Salicylic Acid** (Vicksburg, Miss.).

The best ordinary solvent is alcohol; but a purely alcoholic solution would no doubt be an undesirable form of administration. A number of salts have been proposed to facilitate its solution, such as borax, sodium, or ammonium phosphate, ammonium citrate, potassium, calcium or ammonium acetate, etc., but all of them furnish mixtures which have a very disagreeable taste, rather difficult to be covered. At one time it was supposed that salicylic acid should be administered in a free state, in order to produce its curative effects in rheumatism; the experience of the two last years, however, has proved this supposition to be incorrect. It is now conclusively proved that salicylates are of equal value as the free acid, and as they are entirely devoid of caustic or irritating taste, they may be employed in place of it with great advantage. *Wittich*, who has lately written a small book on this subject, states that he found the only safe way of administering free salicylic acid, in *substance*, was by enveloping it in wafer-capsules, in rather small quantities, and giving a certain number of them at short intervals. He does not advise the use of mixtures containing the free acid.

Among the neutral salicylates, those of sodium and lithium are probably the best. According to his experience the latter does not possess any specific advantage over the former, as has been claimed by some. Salicylate of sodium contains, according to Valmont, ⅞ of salicylic acid and ⅛ of soda, so that its effect appears to be only about ⅛ less than that of the free acid.

Wittich is in the habit of prescribing 10 grammes of sodium salicylate in 100 grammes of water and directs a tablespoonful to be added to half a tumbler of water. In case the stomach does not well bear it, it may be diluted with Vichy water or with ordinary water and a small quantity of brandy (*Wittich*). Lithium salicylate contains, according to the same author, ⅘ of salicylic acid. It may be administered in the same manner. Simple elixir forms an agreeable vehicle for both salts.

No. 454.—**Oil of Rhodium** (D. B. D.).

The wood of the root *Convolvulus Scoparius* (according to others of *Genista Canariensis*), both growing in the Canary Islands, is known under the name of *lignum rhodii*, or "rose-wood." This latter term must not be confounded with the rose-wood used in the manufacture of fine cabinet work, which is derived from other sources. Lignum rhodii, rasped, is used as an aromatic filling of cushions, or for preparing an aromatic tincture; by distillation it yields an essential oil which is employed in perfumery, and is said to be sometimes used for adulterating oil of roses. It has rarely been employed in medicine; both the wood and the oil have occasionally been used as ingredients in decoctions for "purifying the blood." They have diaphoretic and diuretic properties. (See *C. G. Kühn, Lexicon Medicum*, Lips., 1832, p. 1,206.

No. 455.—**Persian Insect Powder** (H., Grand Haven, Mich.).

The insect powder of the market consists of the dried and powdered flowers of the *Pyrethrum carneum* M. B., and *P. roseum* M. B., both natives of the Caucasus; or of the powdered flowers of *Pyrethrum cinerariæfolium* Trev., native of Dalmatia, and known in trade as "Flores Chrysanthemi." The latter is said to be less effective, but is of late years in much more demand than the former.

No. 456.—**"Liquor Dandelion"** (R., Philadelphia).

We know of no such preparation as "Liquor Dandelion; Squire's," but presume it is intended for "Succus Taraxaci," Br. Pharm., as made by Mr. Squire.

No. 457.—**Chlorodyne** (R., Philadelphia).

You ask whether the quantity of morphia in the formula given on page 281 of our September number is not too small, as we have previously published another, in which the proportion was much larger.—There are a great many formulæ for chlorodyne, and we cannot pretend to say which comes nearest to the genuine. But Squire's formula, as given in our September number, is very commonly followed. It has also been adopted by the Amer. Pharm. Assoc. (see *Proceedings*, 22, p. 338).

No. 458.—**Gelatin-Dynamite.** (W., Beverly, N. J.).

We are not aware that any of this is made in this country. If any one can give you further information about it, it will probably be some member of the U. S. Engineer corps, to whom we would recommend you to apply.

No. 459.—**Vehicle for Chloral** (D. B. D.).

It is difficult to cover the taste of chloral in a mixture, so as not to be distinctly perceptible. The best vehicles are syrup of orange, simple elixir, syrup of raspberries (Syrupus Rubi Idæi, Germ. Pharm.), or syrup of tolu (recommended by Squire). Porter has also been used with great advantage for this purpose. It should never be given on an empty stomach.

No. 460.—**Plaster of Rhus Toxicodendron** (C., South Lyons, Mich.).

To produce a plaster which might possess the irritant properties of Rhus, you may proceed as follows: Melt ten parts of lead-plaster in a mortar; when sufficiently soft and plastic, without being more than warm, incorporate with it one part of the fresh juice obtained by making incisions in the plant. The active principle of Rhus is a volatile acid, which is dissipated by heat. Great care is, therefore, necessary not to expose yourself to its effects. We hardly think that such a plaster will be safe to use, except for very particular purposes, as it seems to be in your case.

No. 461.—**Oleomargarine and Butter** (M., Brooklyn, N. Y.).

Hehner and Angell's method of detecting foreign fats in butter, which is the most reliable test so far known for distinguishing genuine from artificial butter, has been given in full on page 49 of our February number for 1878.

No. 462.—**Vermin Destroyer** (C. F., Newburgh, N. Y.).

A note in a late number of the *Pharmaceutische Zeitung* states that *rectified benzine* is an excellent destroyer of vermin. The Austrian Government has adopted its use in the military establishments, and has found it much more economical and effective than the old "baking process."

No. 463.—**Corrigent of Quinia** ("Physic," Richmond, Ky.).

This correspondent asks if there is a medicine which can be combined with quinia without injuring its therapeutic action, and yet prevent its disagreeable results.—It has been ascertained that *bromine* has the power of modifying, in a marked degree, the cerebral effect of quinia, as it generally prevents the headache, ringing of the ears, and general cerebral distress ordinarily following the use of quinia salts. The best method of employment is in the form of hydrobromic acid. Dr. D. C. Wade recommends the following formula:

Quinia sulphate	15 to 80 grs.
Hydrobromic acid, dilute,	
Syrup, of each	1 fl. oz.

Dose: a teaspoonful in water.

No. 464.—**Shoe-Polish** (J. W. C., St. Thomas, Ontario).

A shoe-polish which may be applied with a brush, like blacking, but does not require polishing, may be prepared by dissolving 6 ounces of sugar and 8 ounces of powdered gum Senegal in 5 pints of white wine, then straining, heating over a strong fire, short of boiling, and adding 3 ounces of powdered galls, 6 ounces of powdered green sulphate of iron, and 12 fluid ounces of alcohol. After stirring the mixture for five minutes, remove from the fire, and when nearly cool strain through flannel and bottle. If not black enough, add a little more sulphate of iron, and about 8 ounces of a strong decoction of logwood. Formulæ for shoe-varnishes will be found on page 87 of our present and on page 317 of our last volume.

A good **shoe-blacking** may be made by mixing intimately one pound each of molasses and of *very* finely powdered bone black with one-fourth pound of olive oil, and finally adding gradually one-fourth pound of ordinary sulphuric acid, diluted with three times its weight of water. The whole is allowed to stand at rest for about three hours, when it may be diluted with water or sour beer to the proper consistence. The bone-black must be in the finest possible state of division; but it cannot be replaced by lamp-black, as the latter contains no phosphate of calcium, which could react with the sulphuric acid, and prevent the injurious and corrosive effects of an excess of free acid.

NEW PATENTS.

[*The following list is compiled from official sources, especially for* NEW REMEDIES, *by S. H. Wales & Son, Solicitors of Patents, 10 Spruce St., New York, who will furnish gratis to subscribers any information relating to this department.*]

PATENTS GRANTED DURING AUGUST, 1878.

August 6th, 1878.

Gas and other vapors, condensing apparatus for, T. N. Kirkham, D. Hulett & S., Sr., & S. Chandler, Jr. 206,736
Gas, illuminating, apparatus and process for, M. Gross 206,736
Lead pigment, making, G. T. Lewis and E. O. Bartlett 206,680
Medical compound, W. J. Klapp 206,676

August 13th.

Amalgamating and washing ores, apparatus for, G. J. Firmin and T. A. D. Forster 207,023
Bottle and bottle stopper, H. Codd (R) 8,372
Dental purposes, abrading tool for, E. T. Starr 207,079
Evaporating liquids, apparatus for, J. J. Johnston (R) 8,373
Evaporating liquids, process for, J. J. Johnston (R) 8,374
Medicament, coated compressed, C. Garter 207,013
Stomach and enema pump, E. Rosenzi 207,072
Ultramarine, manufacture of red, J. Zeltner 207,093

August 20th.

Bottle stopper, E. Harris (R) 8,382
Bottle stopper and sprinkler, T. J. Holmes 207,079
Dental rubber-dam clamp, C. E. Busey 307,103

August 27th.

Chair, dental operating, J. O. Whitcomb (R) 8,389
Gas, manufacture of illuminating, D. W. Hunt 207,420
Gas, process and apparatus for manufacturing water, W. A. Goodyear 207,413
Ozone, apparatus for producing, J. Buchanan 207,496

TRADE MARKS REGISTERED DURING AUGUST, 1878.

Medicinal Preparations.

6,443. Theo. H. Videto, Hyde Park, Mass. The arbitrarily selected letters and words "A, B, C, Oriental."

6,444. Jacob L. Wallach, Chicago, Ill. The fanciful or arbitrarily selected words "Gundel Bundel."

6,467. Benjamin F. Rackley, Dover, N. H. A monogram composed of the letters "B. F. R."

6,480. Joseph Saunders, Brooklyn, N. Y. The figure of a horse and rider.

6,494. James C. Kerr, Cincinnati, Ohio. "A fac-simile of my signature."

6,495. Mrs. Joe Person, Franklinton, N. C. "A pictorial illustration representing an Indian warrior in a kneeling position on a bank or cliff overlooking a water-fall, as shown."

6,496. The Franklin Company, New York, N. Y. The word-symbol "Miasmine," arranged as shown.

Soap, Perfumery, etc.

6,462. Charles F. Bates, Quincy, Mass. A triangle inclosing an index-hand.

6,463. Day & Frick, Philadelphia, Pa. The word "Chain."

6,482. Johann Maria Farina, Cologne, Germany. The medals and coats-of-arms, arranged as shown in the annexed fac-simile, and the name or designation "Jean Maria Farina, Place Juliers No. 4, Cologne."

6,491. Day & Frick, Philadelphia, Pa. "The pictorial representation of chain-links, substantially as shown."

6,502. John A. Lansing, Brookline, Mass. The word-symbol "Rex."

6,519. David Brown & Co., New York, N. Y. The word-symbol "Bonanza."

Chemicals, Paints.

6,485. Anthony Pirz, Long Island City, N. Y. The fanciful or arbitrarily selected word "Carniola."

6,521. Adolphus Levesque, Brooklyn, N. Y. A swan, represented as resting or swimming on the water, having the letter "S" on the right and "W" on the opposite or left side, as shown.

ITEMS.

New York College of Pharmacy.—The introductory lecture at the College of Pharmacy of the City of New York was delivered on Monday, the 23d of September, by Prof. W. De F. Day, to the senior, and by Prof. C. F. Chandler, on the following evening, to the junior class. The annual course in the Laboratory commenced on the first of the same month. The class consists of 240 students, with an attendance of 92 in the voluntary classes. A considerable number of young men, designing to attend, failed to procure their matriculation ticket before October 8th, and were thereby excluded. The students this year come from nearly all the different States of the Union, Central and South America, and from other countries. This is the largest number of students that has ever attended any of the annual sessions of this College; being an increase of nearly seven hundred per cent over the session of 1870 (35).

The number of volumes in the Library has considerably increased, many American and foreign pharmaceutical and chemical journals being on file. Members, students, or interested persons have access to it, under certain restrictions, free of charge. The specimens in the Herbarium have been overhauled and new ones put in the place of the imperfect. Prof. Koehler has added a collection of medicinal plants growing within the environs of New York.

The Trustees have appointed Messrs. H. L. Coit and B. F. Hays "Quiz Masters" for the senior students and they are confident that this innovation will be of great service to the students.

Conversational meetings of the College will be held on the third Thursday in November, December, February, and April. The success of those held last year augur well for their success this year. At the one to be held this month, Mr. D. C. Robbins has consented to exhibit his large private collection of Cinchonas and Cinchona Alkaloids, and many members have promised to exhibit articles of interest. All persons interested in pharmaceutical science are cordially invited to be present.

The Board of Pharmacy has now permanent rooms in the College Building. Its secretary will have his office hours on the first and third Wednesday from 2–4 P.M. of each month.

British Pharmaceutical Conference:—The following officers were recently elected for 1879:—*President:* G. F. Schacht, F.C.S., Clifton. *Vice-Presidents:* Professor Tichborne, F.C.S., Dublin; R. Reynolds, F.C.S., Leeds; J. Williams, F.C.S., London. *Treasurer:* C. Ekin, F.C.S., Bath. *General Secretaries:* Professor Attfield, F.C.S., London; F. Baden Benger, F.C.S., Manchester. *Other members of Executive Committee:* M. Carteighe, F.C.S., London; T. Greenish, F.C.S., London; H. N. Draper, F.C.S., Dublin; A. H. Mason, F.C.S., Liverpool; C. Symes, Ph.D., Liverpool; W. A. Tilden, D.Sc., F.C.S., Clifton; C. Umney, F.C.S., London; J. C. Thresh, F.C.S., Buxton. *Auditor:* W. Hayes, Dublin. The Executive Committee will appoint from the Sheffield pharmacists a vice-president, a local secretary, an auditor, and another member ofcommittee.

The Sale of Kumys in Chicago—for several years quite an industry—during the past summer season has been very large. It has been used extensively by the sick, and often prescribed by practitioners as a beverage or a medicine; often procured by the patients for its pleasantness as a liquid food and drink. But it is not unlikely the major part of that sold has been used by the well as a summer drink. The article has been sold by the glass by manufacturers—generally druggists—and nearly every drug store has had displayed in its windows a placard, "Kumys on Draught." Several manufacturers employ delivery wagons to supply regularly such druggists as do not themselves manufacture, as well as families. With a class, kumys drinking is quite fashionable; it has taken the place of liquor drinking. It is now the correct thing on a hot day to ask a friend to step in and take a glass of kumys. Many attempts have been made by families and others to make kumys domestically, but so far the only really fine samples have come from the hands of the expert manufacturers who make a business of it. It would be used more extensively if the cost were less. Thirty and forty cents a quart puts it out of the reach of the masses for a regular diet.—*Chicago Med. Jour. & Exam.*

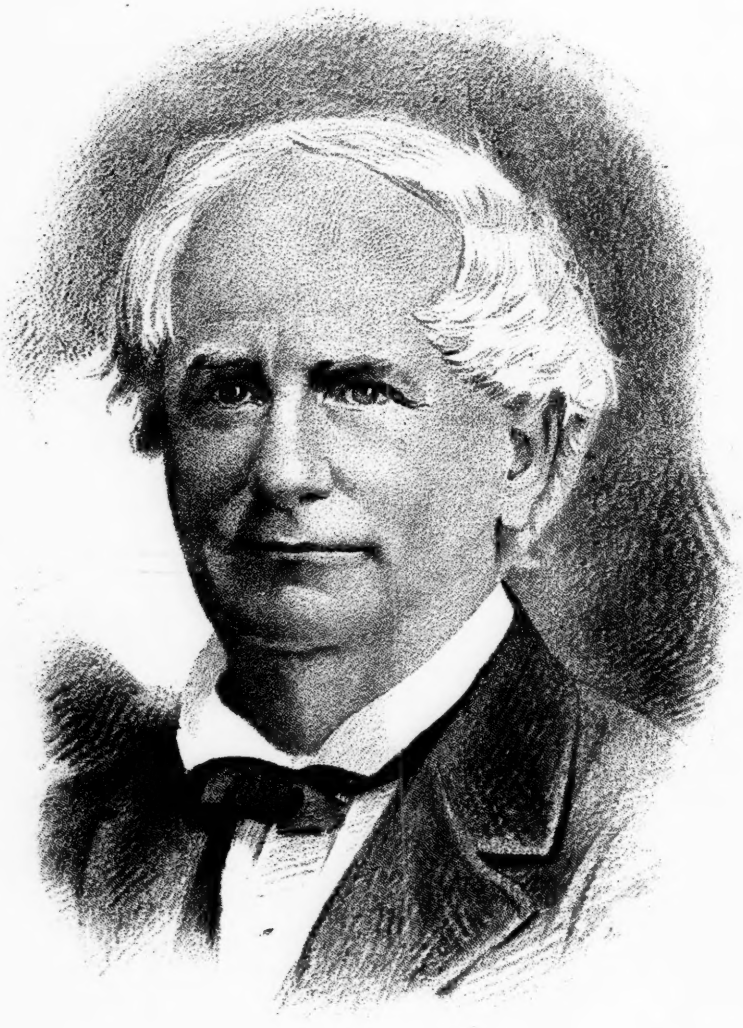
Carl Warburg.—Surgeon-General Maclean, M.D., in a letter to the *London Times* states that Dr. Carl Warburg, a formula for whose tincture, used so successfully in the treatment of malarial fevers, appeared in a recent number of NEW REMEDIES, is now living in poverty in England; the fortune made by him from the manufacture and sale of his remedy having been lost and his action in making public the formula having resulted to his personal disadvantage.

Formula for Anorexia.—DR. Fonssagrives recommends the following formula:—Bruised Chinese rhubarb, bruised peel of bitter orange, of each 4 parts, and water 250 parts. This is to be infused cold during three days. Two or three tablespoonfuls are to be taken daily, an hour before dinner. If this does not succeed, he prescribes one or two pills an hour before dinner, each containing one centigramme of alcoholic extract of nux vomica, and twenty centigrammes of extract of gentian, continuing them until the appetite is suitably restored.

Glycerin as an Anti-Ferment.—Mr. Monk states, in the *Chemical Journal*, that glycerin retards the lactic and alcoholic fermentations. One-fifth of glycerin added to milk, at a temperature of 15° to 20° C., prevented it from turning sour for eight or ten days. One-half or one-third of glycerin, at the same temperature, postponed the fermentation of milk for six or seven weeks. At higher temperatures, larger quantities are needed to produce the same results.

A New Source of Formic Acid.—According to the statements now circulating in the scientific journals, the United States Entomological Commission have found a possible use for those scourges of the West, the locusts. It is affirmed that when their bodies are treated with sulphuric acid, formic acid is produced in abundance. The exact value of formic acid, however, remains an unknown quantity.

SUPPLEMENT TO
'NEW REMEDIES," an Illustrated Monthly Trade Journal.
New York, December 15th, 1878.



THE LATE
THOMAS H. POWERS,
OF PHILADELPHIA.